Public Utilities

Volume 66 No. 2 July 21, 1960

In Two Sections—Section

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CAN GAS PRODUCER REGULATION BE MADE WORKABLE?

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Trending Utility Plant Costs

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Important Concepts As to Fair Return and Cost of Money

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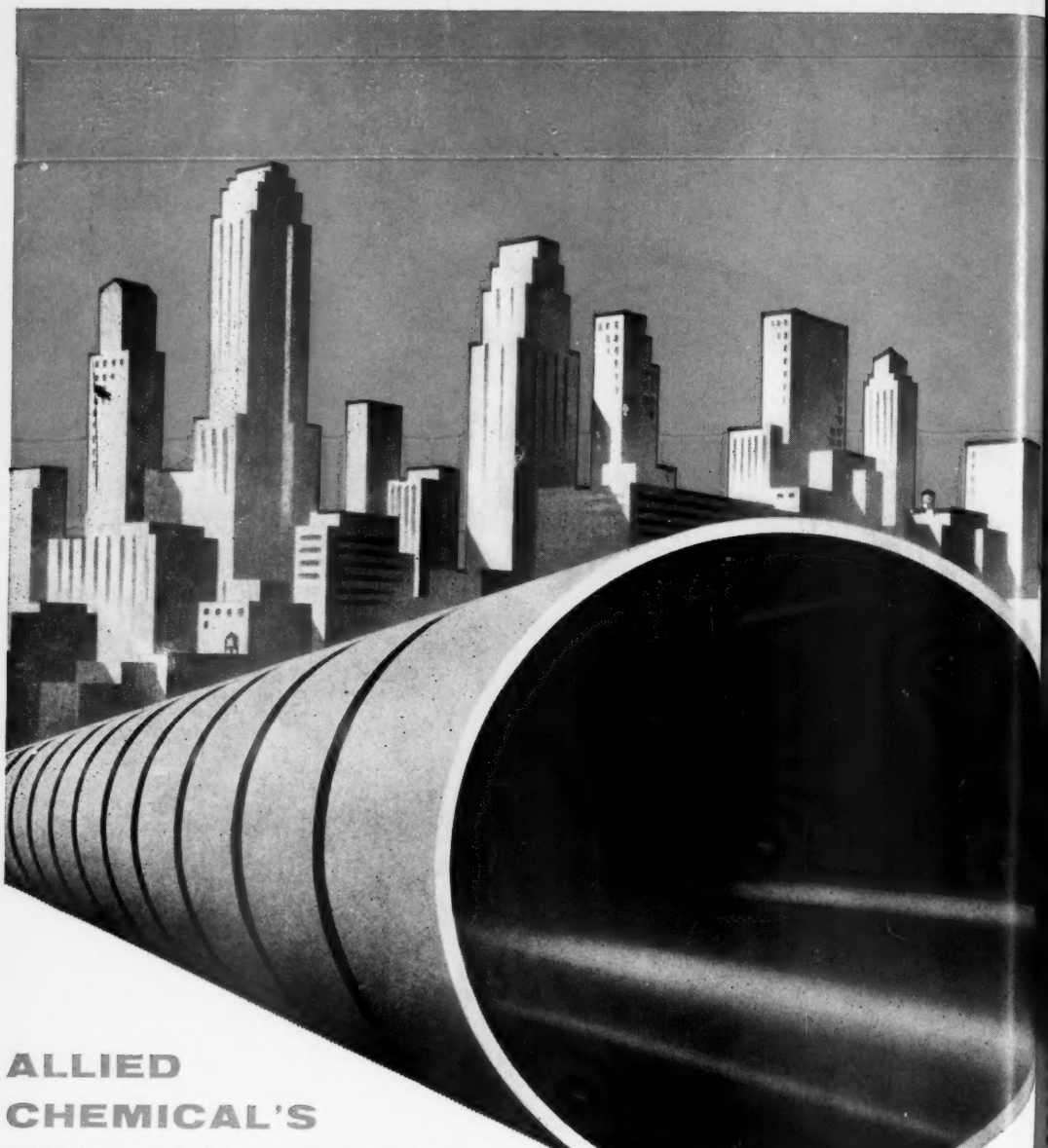
AFL-CIO Energy Survey



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bscriptions: Address correspondence to PUBLIC TILITIES FORTNIGHTLY, circulation department, 2 Pennsylvania Building, Washington 4, D. C. low one month for change of address.

ngle copies $1.00. Annual subscription price 5 issues a year): United States and posses-ns, $15.00; Pan American countries, $15.00; nada, $16.00; all other countries, $17.50.

tered as second-class matter April 29, 1915, der the Act of March 3, 1879, at the Post Office Baltimore, Md., December 31, 1936.

Public Utilities
FORTNIGHTLY

VOLUME 66 JULY 21, 1960 NUMBER 2

ARTICLES

FEATURE SECTIONS

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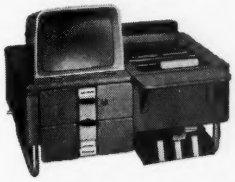

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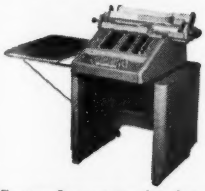

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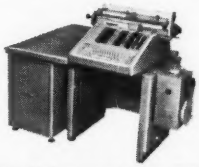

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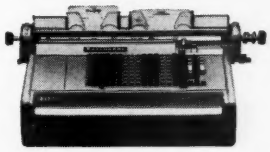

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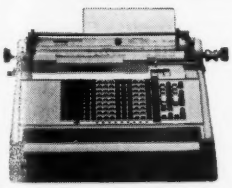

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Pages with the Editors

By the time these lines appear in print, the 86th Congress will have adjourned—or at least recessed until after the conventions. At this writing, however, Congress was still in the throes of trying to clean up an avalanche of unfinished business prior to adjournment.

As is usually the case, a number of important bills seemed likely to be caught in the final log jam with no enactment in sight. Among these was a bill approved by the House Interstate Commerce Committee setting up new rules for more effective and ethical procedure by the federal regulatory commissions. The bill approved by the House committee follows two and a half years of headline-making inquiries by the House committee's Legislative Oversight Subcommittee.

We get increasing evidence that the commissions themselves at both the federal and state levels are quite sensitive to the need of streamlining procedures and making them better understood and assuring public confidence in commission regulation as an institution. Probably the best evidence, as the lawyers would say, is seen in the establishment, under the auspices of the National Association of Railroad and Utilities Commissioners, of a short summer course for commission staff personnel and for the commissioners themselves, if they want to attend. The first experience with this course in July, 1959, at Georgia Institute of Technology, Atlanta, was quite successful. The course is being repeated this year under the same auspices of the NARUC and Georgia Tech.

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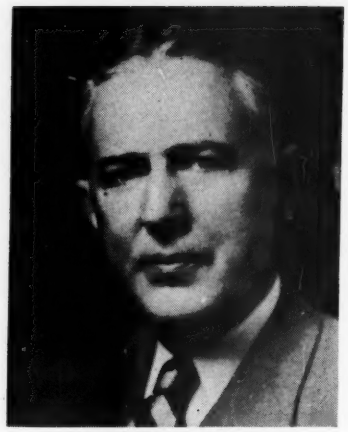
EDWARD FALCK



RALPH E. BADGER

We were interested to note that such a veteran authority on public utility economics and regulation as Dr. Martin G. Glaeser, member of the Wisconsin Public Service Commission, has been active in promoting this worthy enterprise. In a recent letter to federal and state commissioners and their staffs, Dr. Glaeser rightly stressed the critical need of better training of regulatory personnel at this time in the light of what has been happening in Washington, D. C., for the past couple of years. The letter stated in part:

> Recent events have served to emphasize once more that the commission system of administrative regulation of public utilities is under continuous criticism. This criticism comes not only from outside laymen who view a scheme of government regulation of

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monopolistic industries with suspicion but also from the professionals, some of whom have grown up in the service of commissions. When added to the inherent complexities of the task confronting these commissions it is indeed surprising that the appointment of a special committee to undertake a study of the problem of procurement and training of commission personnel has been so long in coming.

Although these industries, by their very nature, supply certain abiding functions in our economy, the technologies upon which they are based are nevertheless subject to continuing changes which make for dynamic adjustments.

BOTH as a Wisconsin commissioner and as former professor of economics at Wisconsin University, in addition to his administrative services with the Tennessee Valley Authority and the city of Milwaukee, Dr. Glaeser well knows the stakes involved in creating and maintaining a well-informed corps of regulatory people at the state and federal levels.

THE opening article in this issue deals very definitely with a relatively new and challenging field of regulation—the controversial exercise of control over natural gas producers by the Federal Power Commission. The author of this article is EDWARD FALCK, well-known natural gas engineering consultant of Washington, D. C., who has written an informative roundup of present practices in the field of natural gas producer regulation. MR. FALCK, a native of New York city and an engineering graduate of Columbia University (AB, '30; BS, '31; MS, '32), will be recalled by some readers for his important World War II services as the Director of the Office of War Utilities of the old War Production Board (1944).

ERNEST C. NORTH

* * * *

ERNEST C. NORTH, whose article on "Trending Utility Plant Costs" begins on page 88, is an associate engineer in charge of valuation of public utility rate studies in the compilation of the Handy-Whitman Index for the Baltimore, Maryland, engineering firm of Whitman, Requardt and Associates. He is a graduate of Baltimore Polytechnic Institute ('22) and a fellow of the American Society of Civil Engineers. Prior to joining his present firm in 1941, MR. NORTH has served as an engineer for the city of Baltimore (1925-37), Maryland University (1937-39), and with private construction companies.

* * * *

DR. RALPH E. BADGER, whose article on some important concepts about the fair rate of return begins on page 93, is an associate of Standard Research Consultants, Inc., of New York city. He is a well-known expert in the field of rate regulation and has often testified in important rate cases. He received his doctor's degree from Yale University in 1921 and was assistant professor and later professor of economics at Brown University, specializing in investments and finance. DR. BADGER's article in this issue is a restatement of an analysis which he made of fair return concepts before the Great Lakes conference of the National Association of Railroad and Utilities Commissioners, at White Sulphur Springs, West Virginia, on April 26th.

THE next number of this magazine will be out August 4th.

The Editors

The tool chest that travels

Not since the invention of the dog muzzle has anything been as warmly welcomed by servicemen as the new 1960 Dodge Tradesman.

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Coming in the Next Issue...

(AUGUST 4, 1960, ISSUE)

THE RELATION BETWEEN A FAIR RETURN AND THE RATE BASE

Two kinds of rate base evidence are to be found in the security market. One relates to new and additional securities; the other relates to market trading in already outstanding securities. John H. Bickley, utility consultant, has concluded that the going price of utility capital in the money markets cannot be related to the fair value of property when such value is different from the market value of the securities from which the current price of utility capital is derived. While ability to attract capital is always a necessary consideration in allowing earnings, it has serious limitations and should be approached with full knowledge of the pitfalls.

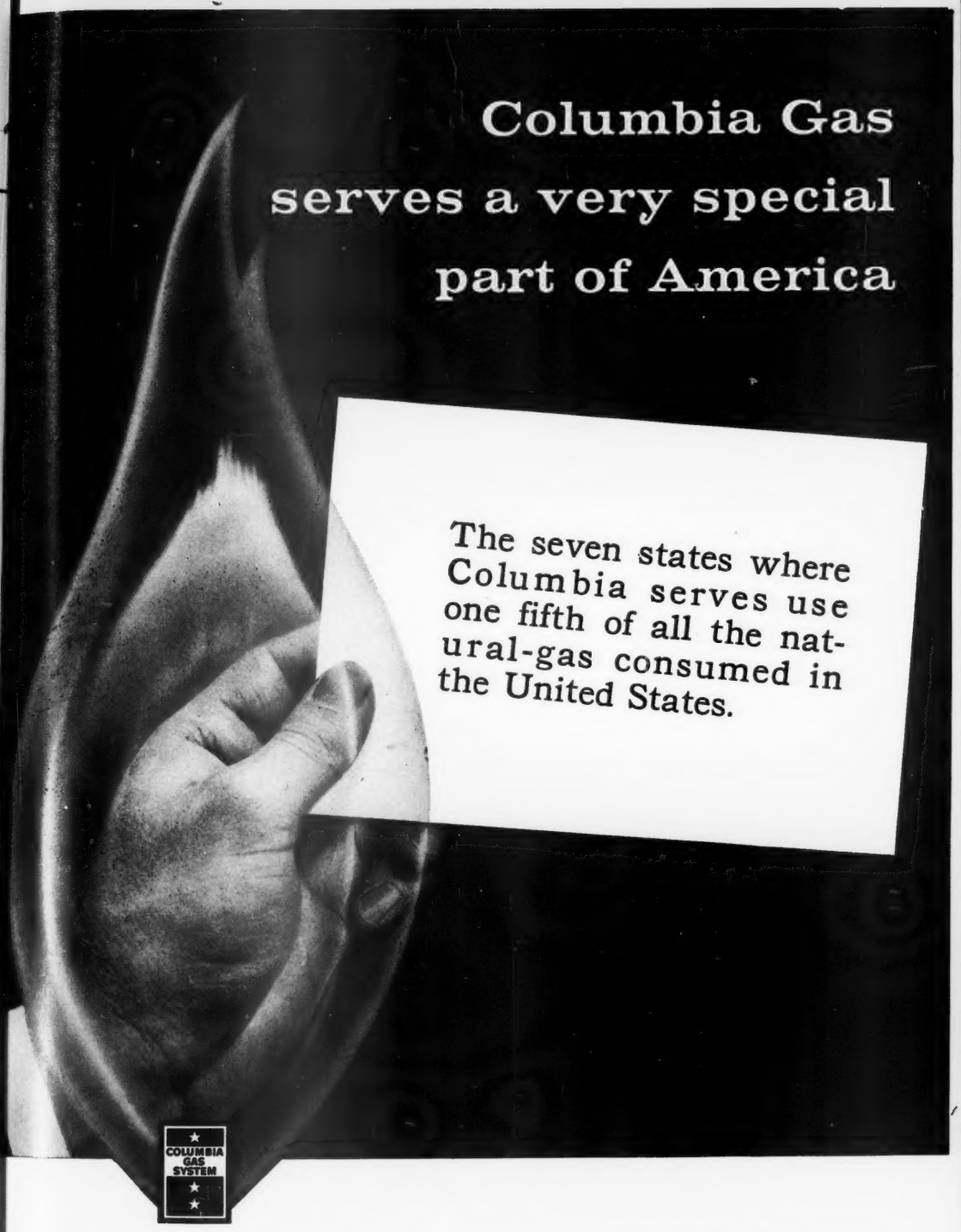
HOW A CITY CHANGED ITS MIND

This is a story of how public opinion was changed in ninety days by a well-planned public relations program which resulted in a victory at the polls for the continuation of private ownership of the water utility service in Gary, Indiana. The referendum was last February. Ruby Proctor, public relations assistant of the Gary-Hobart Water Corporation, has written a blow-by-blow description of how the owners of the utility came to grips with the problem following a campaign last year by the city's mayor on a platform to take over the water utility. As a result of this campaign not only was the election won but the water company has many understanding friends today among the citizens of the city it serves.

FUTURE DEMAND AND PLANT ADEQUACY IN THE ELECTRIC INDUSTRY

The demand for electric energy has persistently expanded since World War II and there is evidence that the upward sweep in the use of electric power will continue into the indeterminate future. Under present conditions, both hydro and steam-generating companies will have to step up their past rate of growth. Franklin H. Cook, professor, department of commerce, college of business administration, Pennsylvania State University, has developed charts and statistics to show that if present equipment is unable to handle increased future demands, new capital must be brought into the industry. Thus, future earnings are predicated upon the present condition of the electric power plants of the nation, plus forecasts of greater revenues.

AND IN ADDITION . . . *Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.*



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Remarkable Remarks

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EDITORIAL STATEMENT
The (Portland) Oregonian.

"When one accepts a 'gift' from Washington, one gives up the free choice that states, as well as individuals, hold dear. When Uncle Sam puts up the money for a new suit, he not only decides what kind of suit it shall be but also picks the color of the tie."

ERWIN D. CANHAM
President, Chamber of Commerce of the United States.

"The profession of politics should always be one of our most highly respected professions. It should attract our ablest and most responsible people. In terms of status and recognition in our communities, there should be no higher rôle than that of politician. This must be true if we are to have the kind of government which can cope with the problems of coming centuries."

JOEL BARLOW
Authority on tax matters.

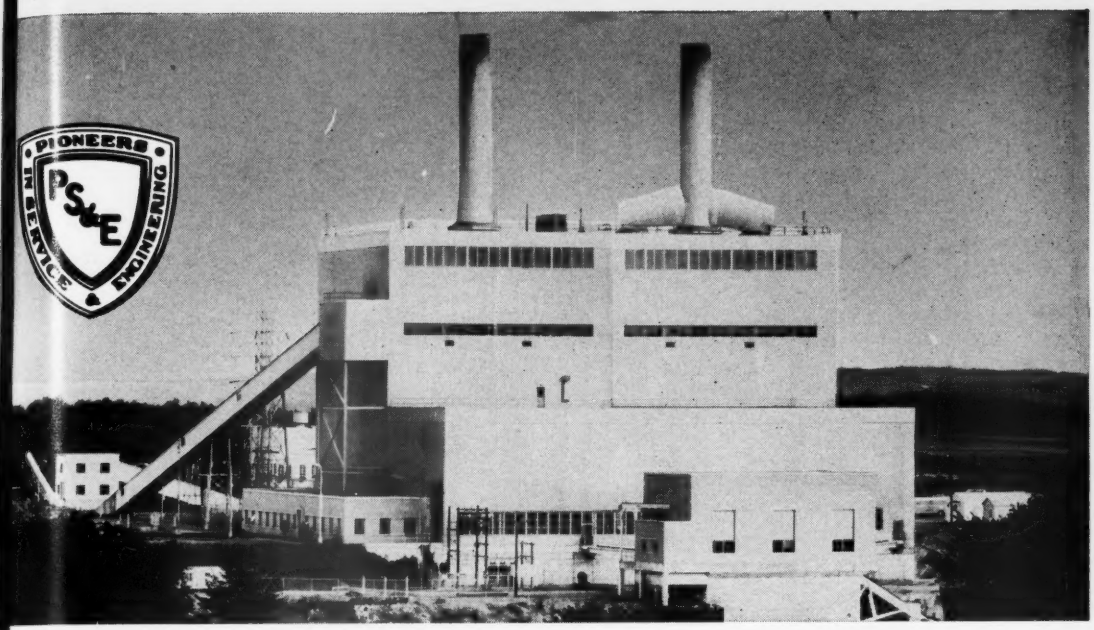
". . . the United States is the most backward of the leading industrial nations in tax depreciation policy. . . . Now while other nations forge ahead, and Russia is investing in capital goods at an astounding rate, we are operating under a depreciation system more than a quarter of a century old, a system that has a profound deterrent effect on capital investment, and is particularly hard on taxpayers with restricted access to outside capital."

FRED A. SEATON
Secretary of the Interior.

". . . I will not support the fallacious and dangerous proposition that the federal government has a 'public utility' responsibility, the inevitable end result of which could only be a federal monopoly and a complete lack of local determination and control. In the power field as in all other areas the proper function of the federal government is to do only that which must be done in the national interest and then only when nonfederal agencies cannot or will not do it."

JOHN L. MCCLELLAN
U. S. Senator from Arkansas.

"[The instability of the U. S. Supreme Court] threatens the very foundations of our Republic. Among other things . . . it has usurped legislative powers vested in Congress; tended to favor the Communist and criminal elements of this country; glibly overruled and set aside decisions made and precedents established at a time when the court was composed of justices learned in the law and schooled in the rudiments of American jurisprudence. [The court has] ignored and nullified the Tenth Amendment to the Constitution, which reserves to the states all powers not delegated to the federal government. The inevitable consequences of such decisions are frightening to contemplate. Unless these trends can be checked, the usurpation of legislative powers stopped, state sovereignty will be destroyed, and a centralized government enthroned by judicial fiat and decree."



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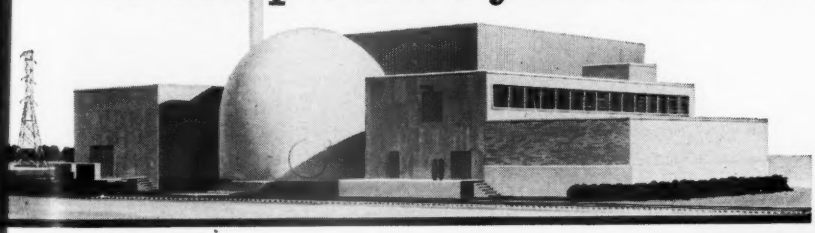

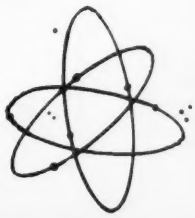

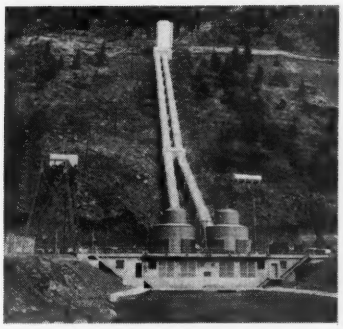

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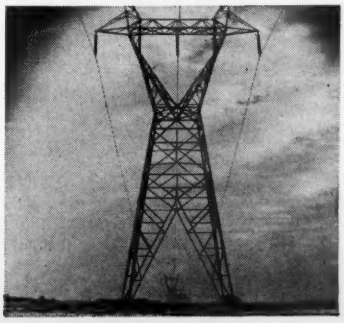

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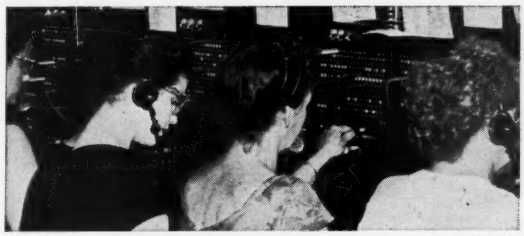
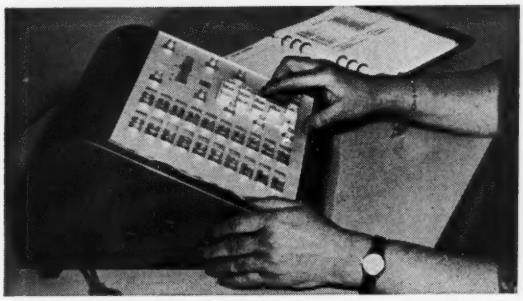


This conventional switchboard at the Irving's One Wall Street headquarters—long a familiar fixture of most company offices—was replaced early in June of this year by a new push-button system of communication.



Today, calls are handled through desk-top push-button units. The Irving plans within a year to include all its branches in the new system.

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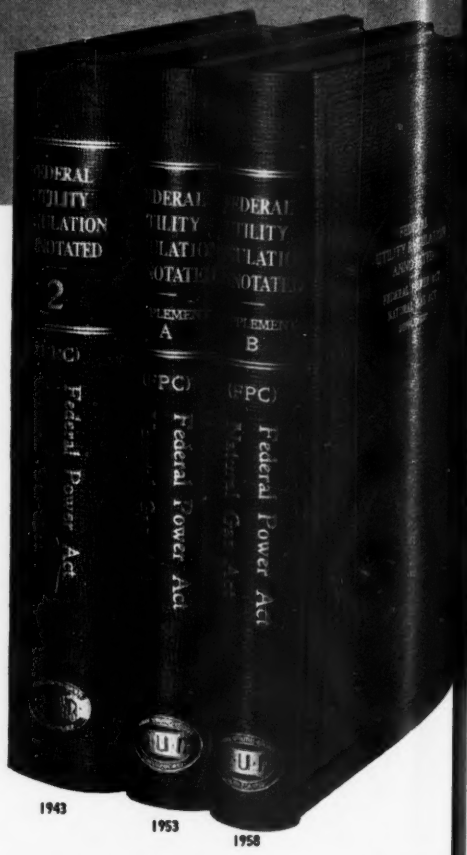

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Commission and court rulings are included various phases of the complex problems arising fr the extension of Commission regulation to natural producers, as a result of the U. S. Supreme Court decisi in the ***Phillips Case***. Decisions are also included deali with the filing of rates by gas producers and those w whom they do business, the departure from the c basis for rate making because of the nature of produ operations, and the troublesome problems as to chan in filed contract rates, such as the questions arising the ***Memphis Case***.

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Utilities Events Calendar

CHECK THESE DATES:

July 21-22—Edison Electric Institute-Rocky Mountain Electrical League will hold joint industrial relations meeting, Denver, Colo.

July 24-Aug. 5—Advertising Federation of America will hold annual management seminar in advertising and marketing, Boston, Mass.

July 24-Aug. 5—Utility Management Workshop will be held, Harriman Campus, Columbia University, Harriman, N. Y.

July 25—Southern Coal Producers Association will hold board meeting, White Sulphur Springs, W. Va.

Aug. 1-3—Institute of Radio Engineers, Professional Group on Communications Systems, will hold meeting, Washington, D. C.

Aug. 8-12—American Institute of Electrical Engineers will hold Pacific general meeting, San Diego, Cal.

Aug. 15-17—Alaska Telephone Association will hold annual convention, Sitka, Alaska.

Aug. 15-17—Heat Transfer Conference and Exhibit will be held, Buffalo, N. Y.

Aug. 15-26—Summer Institute will be held on principles of nondestructive testing, Sacramento State College, Sacramento, Cal.

Aug. 21-23—South Carolina Broadcasters Association will hold summer meeting, Myrtle Beach, S. C.

Aug. 22-26—Western Resources Conference will be held, University of Colorado, Boulder, Colo.

Aug. 22-27—International Conference on Coastal Engineering will be held, The Hague, Netherlands.

Aug. 23-26—Western Electronics Show and Convention will be held, Los Angeles, Cal.

Aug. 25-27—American Movers Institute will hold annual meeting, Washington, D. C.

Aug. 26-27—Oklahoma Broadcasters Association will hold meeting, Wagoner, Okla.

Aug. 29-31—Appalachian Gas Measurement Short Course will be held, University of West Virginia, Morgantown, W. Va.

Aug. 29-Sept. 2—American Bar Association will hold annual meeting, Statler-Hilton Hotel, Washington, D. C.

Aug. 26-31—ABA, Section of Corporation, Banking and Business Law, will hold meeting, Shoreham Hotel, Washington, D. C.

Aug. 27-30—ABA, Section of Administrative Law, will hold meeting, Willard Hotel, Washington, D. C.

Aug. 28-31—ABA, Section of Mineral and Natural Resources Law, will hold meeting, Sheraton-Carlton Hotel, Washington, D. C.

Aug. 28-31—ABA, Section of Public Utility Law, will hold meeting, Shoreham Hotel, Washington, D. C.

Courtesy, Portland General Electric Company

The Dam of Tomorrow

Take an aerial photograph of Round Butte dam site, add some art work, and we have "Tomorrow" (circa 1963-64), with the proposed dam in place and the reservoir as it will appear when the dam is constructed. At left is the Crooked river arm of the future Lake Chinook, a sliver of the Deschutes arm is in the upper center of the picture, with the Metolius at right.

Public Utilities
FORTNIGHTLY

VOLUME 66 JULY 21, 1960 NUMBER 2

Can Gas Producer Regulation Be Made Workable?

An analysis of the factors involved in reaching a practical solution to the vexatious problem of regulation of producers under the Natural Gas Act.

By EDWARD FALCK*

A LOT of argument has flown from judicial benches and across counsel tables since the enactment of the Natural Gas Act in 1938. From the outset there was a widely accepted view (subsequently shared by a majority of the Federal Power Commission) that Congress never intended that the law should be applied to independent gas producers. Congress, itself, by subsequent enactments, twice vetoed by different Presidents, sought to confirm that view.

But with the changing political atmosphere which has settled down since the 1954 Supreme Court decision in the Phillips case,[1] it seems only realistic today to assume that FPC regulation of gas producers is here to stay. If that is a sound position, it would seem to follow that arriving at some workable and acceptable program whereby the producers can live with such regulation is a more practical approach than continued resistance to it.

By way of exploratory consideration along this line, let us look back. Let us review, broadly, what has happened to date in this troubled jurisdictional sea into which a reluctant FPC was pitched

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by the 1954 court decision, and in which it has been struggling ever since, amid swiftly changing currents and few if any clear or reliable navigating guides.

READERS of this publication are aware, of course, that the Natural Gas Act charged the FPC with the duty of regulating the transportation and sale in interstate commerce of natural gas for resale. The law had, and still has, its limitations: no jurisdiction over direct industrial sales, nor over local distributors, nor control over security issues. Production restrictions involving problems of conservation, proration, etc., are still considered within the province of state control. What is left? Briefly and broadly, there are four main chores for the FPC to perform: (1) granting certificates for the construction or acquisition of pipelines and other plant facilities; (2) reviewing, approving, investigating, or changing filed rates; (3) setting up and enforcing rules for accounts and records; (4) controlling imports, exports, or abandonment of gas supply.

How the FPC Operates

THERE is no need to dwell here on the familiar techniques for carrying out these fairly conventional regulatory tasks, which are similar to those performed by federal and state commissions in other fields of utility operation. The FPC has followed the established pattern of prescribing, by rule, what information it requires with the filing of applications for the exercise of any of its above listed powers. It has set up a staff to inspect, review, and make recommendations on such documents. It has set up independent hearing examiners to make preliminary findings on decisions which may become final unless changed or superseded by the FPC en banc. Intervention by other parties who profess an interest in such proceedings is fairly liberally allowed. It follows the same pattern, in short, previously taken for interstate electric cases under the Federal Power Act, and followed by other federal commissions under their regulatory statutes.

In order to give everyone his day in court, the commission has made it possible for interveners and others to pile up enormous records in individual cases. This, coupled with an avalanche of rate and certificate cases, set off by the rapid gas service expansion and economic inflation of recent years, has created a tremendous work load for the FPC. It has tried, with the help of bar associations (both American and FPC) and industry people, to streamline and short-cut procedures through such devices as prehearing conferences, "canned testimony," encouraging settlements between parties, etc. Still the backlog of producers' cases builds up and the FPC falls behind. It even considered the use of blanket rule procedures for producer rate cases; but, in the light of pretty clear court precedent pointing to the contrary, the commission decided to follow the case-by-case procedure.

JUST what has been the main stumbling block? At the risk of oversimplification it might be said to focus on the lack of a generally acceptable, clear-cut definition of what constitutes a "just and reasonable" rate, within the meaning of the statute. Two alternative but mutually exclusive concepts emerge: (1) the use of field price data, with due regard for

"arm's-length bargaining"; (2) the cost-of-service approach used in conventional utility rate fixing by regulatory authority.

The commission, itself, did not feel that it was necessarily confined to the second of these methods—the cost-of-service approach. It has relied heavily on field price evidence in support of proposed rates in some cases. But it did get a setback from the courts in its first major effort to work out a reasonable test for a production rate filed by an interstate pipeline company, Panhandle Eastern, in a case decided[2] only seven weeks before the Phillips decision. The FPC had permitted Panhandle to receive the weighted average field price for gas produced from its own wells (instead of a much lower price based on production expense plus a return on depreciated original cost). The city of Detroit appealed and the U. S. circuit court of appeals for the District of Columbia[3] threw the first real stumbling block for the FPC across this promising short cut.

THE court's opinion by Judge Fahy tried to set up a number of ostensible guides, but in the final analysis they were hardly clear-cut and unequivocal. If the writer may presume, in the interests of brevity, to paraphrase the judicial language, the court laid down the following "do's and don'ts" for commissions' guidance:

1. The FPC does not necessarily have to fix rates at the lowest level of reasonableness.

2. Nevertheless, the primary aim of the act is "to protect consumers against exploitation."

3. So, while the commission may consider other measures of reasonableness, besides the cost of service, it must always "relate its action to the primary aim of the act."

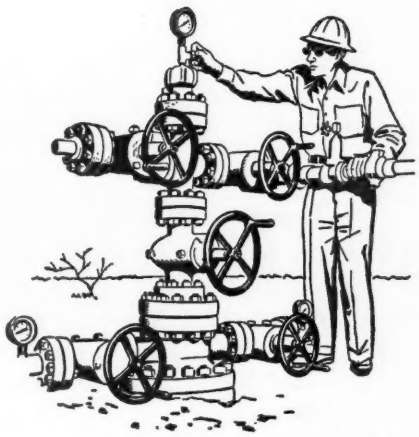
4. The commission cannot allow a rate increase which is any more than actually needed to encourage gas development, unless it gets more authority from Congress to do so.

5. Any "increase" in this context means an increase above rates fixed as reasonable on a conventional cost-of-service basis.

6. So, while cost of service is not the only method available under the act, it must be used as a basis of comparison or "at least as a point of departure."

7. This judicial insistence on the cost-of-service or rate base method as an "anchor" is not inconsistent with the "end result" test employed by the U. S. Supreme Court in the Hope case.[4]

VIEWED critically these criteria, if stringently applied, would seem to re-



quire an almost "double feature" procedure in a rate case in which the commission desires, for any reason, to depart from the strict cost base approach. And since the main objective in seeking any alternative to that approach is usually to avoid difficulties, complexities, delay, and expense involved in the current ascertainment of the cost base, the court's views as to when and how the FPC might use any other kind of approach might seem to suggest the old nursery rhyme's permission to the would-be swimmer, "Hang your clothes on a hickory limb and don't go near the water."

Be that as it may, the U. S. Supreme Court denied further review of Judge Fahy's decision. So the case went back to the FPC for another try. As of this writing, the FPC has not been able to work out anything more. Subsequently, in other producer rate cases, the commission has granted motions by its staff to dismiss proposed rate applications on grounds that no general evidence as to cost had been presented. In one of the cases,[5] the fifth U. S. circuit court of appeals held that if the commission finds that a rate is reasonable to the consuming public, it need not reject such a rate "merely because it will yield to a particular producer more than the very minimum regarded by constitutional standards."

Rate Base Evidence

ALTHOUGH producers quite generally refused to present cost-of-service evidence during the first few years of regulation, the decisions of the FPC and the courts have impelled them to adopt a different course.

In rate cases where cost-of-service exhibits have been presented, there has been a further sharp cleavage between producers on the one hand and the FPC staff and gas distributing companies on the other. This is on the question of how to allocate the joint costs of exploration and development between gas and liquid hydrocarbons. Producers have urged that the Btu method is the soundest and most practical method of cost allocation. The FPC staff and various gas distributing companies have favored the sales realization method. As might be expected, the Btu method of allocation results in a substantially higher indicated unit cost of service than the sales realization method. Each of these methods has its own infirmities, and the FPC itself has not come out with any specific ruling on this matter.

IN approximate terms, the Btu method employs a 6-to-1 ratio; that is, one barrel of oil is equivalent to six Mcf of gas. Accordingly, if the validity of this method is assumed, then gas at 50 cents per Mcf becomes the equivalent value of oil at $3 per barrel for cost allocation purposes. This figure is so much greater than even the highest gas prices now being negotiated in the field that it is only to be expected that the staff looks upon the Btu method with a mixture of consternation and disapproval. On the other hand, the sales realization method, using historical prices ranging from five cents to 12 cents per Mcf has the effect of freezing the price of gas at the unduly low price levels that obtained during a period when gas was in surplus supply and selling at slightly more than dump prices. Other methods of cost allocation, some of them quite complicated, have been proposed.

These include the reserves added realization method, sales realization based upon present or expected future prices instead of historical prices, relative number of straight oil and straight gas wells discovered, etc.

The landmark case in this field of cost allocation and accounting methods has been the Phillips Petroleum Company case, Docket No. G-1148. This case is almost unique in the history of independent producer regulation. It is a direct outgrowth of the U. S. Supreme Court decision in Phillips Petroleum Co. *v.* Wisconsin, previously referred to. It started with an investigation instituted by the commission as far back as October 28, 1948.[6]

AMONG the various other questions, the examiner reviewed in some detail all of the many different methods suggested by the parties for allocation of production and exploration costs between gas and oil. The commission has not yet handed down its final decision in this case. The examiner in his lengthy decision has crystallized many issues of regulatory policy, so that the commission's final decision will be studied by the entire gas industry with great interest. Among these issues are the extent to which the cost-of-service approach will be applied to independent producers, the method or methods preferred for allocation of production and exploration costs as between gas and oil, the rate of return and the treatment to be accorded to the special statutory allowances available under the Internal Revenue Code to producers of oil and gas.

APART from the question of allocating joint costs between gas and liquids, the two most important policy questions that are still to be resolved are the related questions of income tax allowance and rate of return for producers. The staff exhibits on rate of return generally have recommended a 9 per cent rate of return for producers, and actual taxes, if any. The staff has consistently recommended against so-called "phantom" taxes. In this position the staff has been supported by such state commissions as New York, Wisconsin, and California. In contrast, industry witnesses have introduced cost-

of-service exhibits containing suggested rates of return ranging from 12 per cent to 20 per cent and even higher. Industry witnesses have also uniformly taken the position that the tax benefits available through depletion and intangible well-drilling allowance should be retained by the companies rather than passed on as savings to the consumers.

THE commission has indicated in several decisions, the most important of which is one involving the El Paso Natural Gas Company, Docket No. G-4769, that it will consider the total cash flow required by the natural gas company and available from the combined interaction of rate of return and tax allowances. In this case, the commission allowed El Paso a rate of return of 6 per cent on its properties beyond the well mouth but 8.61 per cent on its well-mouth properties. With regard to depletion, the commission stated in its Opinion No. 326, issued August 10, 1959:

> Plainly the intention of Congress was to grant the advantage of percentage of income depletion to the producers, and unlike liberalized depreciation, there is no postponement of taxes; it is an outright tax saving. It is true that the legislative history does not show that Congress has considered the effect of the percentage of income depletion provision (or that dealing with intangible well-drilling costs) on regulation, but Congress could not have meant that the benefits be automatically taken from the producers and passed along to the consumers in the case of those companies in the gas industry which happened to be subject to regulation, while letting unregulated companies in the gas, oil, and other extractive industries retain these tax advantages.[7]

While it appears from the above-quoted language that the commission intended to permit producers to retain the benefit of the special statutory allowances made available under the Internal Revenue Code, nevertheless the action of the commission in combining the tax allowance and rate of return into a composite cash flow may have the effect of taking away from the producers a portion of these tax advantages, in that the rate of return allowed will be less than would have been the case had the depletion allowance not been claimed. For this reason, El Paso has now taken an appeal from the commission's ruling to the fifth U. S. circuit court of appeals.

Fixing the Return Allowance

OVERALL revenue collected by any regulated enterprise must be adequate to cover the cost of rendering the service, including a satisfactory return to the owners. The courts have held that the rate of return of a public utility must be in line with the return earned by unregulated business enterprises having similar risks, since otherwise it would be impossible for the regulated company to obtain needed additional capital in competition with unregulated businesses. While the FPC has the authority to prevent the expansion of a natural gas company, it does not have the authority to compel expansion of service. Accordingly, financial inducements must be relied upon if both interstate pipeline companies and independent producers are to enlarge their

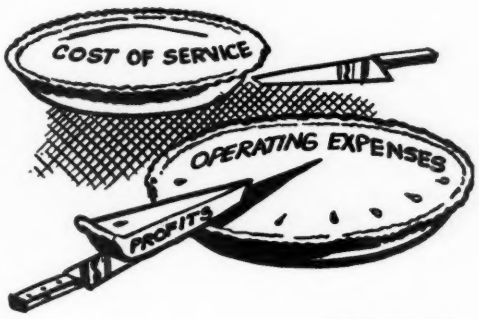
facilities and take care of the increasing requirements of the public. If regulation is so severe as to take away all opportunities for profit, the industry will die on the vine. The profit incentive is vitally important in an industry where relatively large amounts of capital are tied up over a period of many years.[8]

The FPC, like other federal and most state commissions, has adopted depreciated original cost as the rate base upon which a fair return may be earned. From time to time natural gas companies have sought to use replacement cost or reproduction cost or present value instead of original cost, but so far they have been unsuccessful in persuading both the commission and the courts to depart from the original cost rate base method.

IN groping for a solution to the problem of regulating the prices of independent producers, the suggestion has frequently been made that the commission adopt some form of area pricing, so that producers in a particular field or gas supply area would receive the same base price, with possible adjustments for quality of gas, delivery pressure, Btu value, etc. However, the fixing of an area price could conceivably conflict with the constitutional requirement safeguarding the owners of property against confiscation without due process. Should the commission adopt an area price method of regulation, it is likely that it would afford individual producers an opportunity to petition the commission for approval of a price higher than the area price, upon a showing that the area price would be confiscatory.

Area prices are today being used by the commission as a convenient tool for reviewing the propriety of initial price in § 7 certificate cases. It is impossible as a practical matter for producers and the commission staff to make a full-blown rate case out of every single certificate case involving the dedication of new gas to the interstate market. Accordingly, field price data are being used to establish the existing plateau of prices for key geographic areas. In view of the Detroit case, the commission will, in all probability, require a producer to submit financial or cost evidence to justify any initial price higher than the existing area price. In the absence of such a showing, the commission will probably condition the certificate so as to require the initial price to be reduced to the area level.

DURING the years 1957 and 1958, a number of cases were heard before FPC examiners which involved proposals by the commission staff and some of the state regulatory commissions and gas distributing companies to attach a price condition to the producer certificate in question. In many of these the FPC presiding examiners refused the requests to condition the certificates so as to provide for a lower rate than that contained in the original contracts.[9]



The Catco Case

IT appears that a majority of the commission had reached a working conclusion against imposing price conditions in producer certificate cases. The most spectacular case involving this issue was the celebrated Catco case, involving the proposed sale to Tennessee Gas Transmission Company by a group of producers, Atlantic Refining Company, Cities Service Production Company, Continental Oil Company, and Tidewater Oil Company, Docket Nos. G-11,024 et al.

These four companies jointly own oil and gas leases covering large acreages of the continental shelf off the Louisiana coast. The companies have dedicated to Tennessee Gas Transmission a huge reserve of more than 1.75 billion cubic feet of gas to be produced from 95,000 acres of their leases. The contracts call for an initial price of 22.4 cents per Mcf, including one-cent tax, with escalation clauses calling for periodic increases up to two cents per Mcf in the future. On March 29, 1957, the presiding examiner found that the proposed sales were required by the public convenience and necessity. While he also found that the price was higher than any price Tennessee was then paying, he referred to other prices currently being paid for onshore sales covering smaller reserves, and he refused to condition the certificates on the acceptance of a lower price by the parties.

THERE followed a complicated series of commission actions. On April 22, 1957, the commission reversed the examiner's finding on the ground that the evidence submitted was insufficient as to price and that "this crucial sale should not be permanently certificated unless the rate level has been shown to be in the public interest." The commission granted the producers temporary certificates and sent the case back to the examiner to determine what rates were required by public convenience and necessity.

The producers then objected on the ground that they could not afford to begin construction until at least the initial rate was set up. The commission, at first, insisted that the record was insufficient. It sought to work out an arrangement whereby the producer would accept certificates calling for an initial price of 17 cents per Mcf (plus one-cent tax); and providing that one day after the commencement of deliveries, the 17-cent price would be escalated to 21.4 cents (plus one-cent tax), the increase to be collected subject to refund. But the producers refused to accept the 17-cent price and threatened to terminate their contracts with Tennessee.

The commission then, after oral argument, made a concession. Its final order was based on the primary consideration that the customers of Tennessee greatly needed the increased supplies of gas. Under these circumstances, it issued certificates to the producers allowing the 21.4 cents (plus one-cent tax), since this figure had not been shown to be necessarily excessive. However, in order to protect the public against the possibility of having to pay excessive prices, the commission stated that it would promptly initiate an investigation of the reasonableness of the rates in a § 5 (a) case.

IT was this final order of the FPC which the U. S. Supreme Court overruled. The highest court pointed out (on June 22, 1959)[10] that § 5 proceedings are fre-

quently long delayed, so that this method of protection does not really protect the public. In the court's language:

> In view of this framework in which the commission is authorized and directed to act, the initial certificating of a proposal under § 7 (e) of the act as being required by the public convenience and necessity becomes crucial. This is true because the delay incident to determination in § 5 proceedings through which initial certificated rates are reviewable appears nigh interminable. Although Phillips Petroleum Co. *v.* Wisconsin, 347 US 672, was decided in 1954, cases instituted under § 5 are still in the investigative stage. This long delay, without the protection of refund, as is possible in a § 4 proceeding, would provide a windfall for the natural gas company with a consequent squall for the consumers. This the Congress did not intend. Moreover, the fact that the commission was not given the power to suspend initial rates under § 7 makes it the more important, as the commission itself says, that "this crucial sale should not be permanently certificated unless the rate level has been shown to be in the public interest."

THE rapid rise of producer prices in southern Louisiana in recent years undoubtedly was an important circumstance in shaping the thinking of the court on this issue. The opinion of Justice Clark pointed out that "The price certificated will in effect become the floor for future contracts in the area." He noted that in southern Louisiana, prices have vaulted from 17 cents to over 23 cents. So the court feared that new price plateaus would be created as new contracts were made and unless controlled would result in "exploitation" at the expense of the consumer, who eventually pays for the increases in his monthly bill.[11]

About six months after the Catco de-

cision, the U. S. Supreme Court, in another case, again directed the FPC to reconsider producer prices.[12] The contracts called for Transco to pay to the producers prices ranging from 22.4 cents to 23.3 cents per Mcf, with a periodic increase of two cents every four years. The FPC had originally granted certificates to Transco and the twenty-six producers, refusing to attach a price condition requested by the New York Public Service Commission. The third U. S. circuit court of appeals had upheld the FPC in this case (30 PUR3d 280) on the ground that there had been evidence in the record of a need for the gas at the higher price. The U. S. Supreme Court, however, reversed the circuit court, and sent the case back to the FPC for reconsideration, Justice William O. Douglas dissenting.[13]

Rate Conditions in Certificate Cases

Following the Catco decision of the U. S. Supreme Court, the FPC began to attach price conditions in producer certificate cases. Last October, for example, the commission (Opinion No. 330) imposed a price condition of 15 cents instead of 17 cents for gas to be sold to United Gas Pipe Line Company by two independent producers from the North Henderson field area of Rusk county, Texas.[14]

A very important case, involving sales by seventeen independent producers to El Paso Natural Gas Company, from the Aneth field in the Four Corners area of Utah, Colorado, New Mexico, and Arizona, was decided by the commission on February 23, 1960, in Opinion No. 335. There the FPC granted permanent certificates to the producers but imposed a condition reducing the initial price of the gas from 20 cents to 17.7 cents per Mcf.

Another major case, not yet finally decided, involves the purchase of gas by Transwestern from a number of producers in the Southwest. Last August, the FPC (Opinion No. 328)[15] granted certificates to Transwestern and the various producers involved with price conditions imposed on operations in different areas. For example, the initial price of Gulf Oil's gas produced from the Puckett-Ellenburger field, which constitutes 44.9 per cent of Transwestern's committed reserves, was reduced from 12 cents to 11 cents per Mcf, and the initial price of gas in the Panhandle-Hugoton area was reduced from 23 cents to 17 cents per Mcf. The FPC later announced that it would give these independent producers an opportunity to present further evidence to support their proposed initial prices for sales to Transwestern. This supplemental proceeding is still in progress.

There are many questions of detail relating to initial prices yet to be clarified. Price conditions are generally not imposed in new certificate cases if the initial contract price is equal to or less than the prevailing area prices previously certificated by the commission. Where the proposed initial price breaks the line, however, it will be necessary for the producer to support the proposal with substantial evidence. While the commission has not ruled that the producer must supply a full-bodied cost-of-service presentation, there already are indications that merely establishing the general need for the gas in the consumer markets will not alone be sufficient proof. The financial needs of the

producer must be specifically related to the public service function that he performs in helping to provide new supplies of gas to meet the nation's ever expanding gas requirements. The testimony and exhibits submitted should demonstrate that the proposed price to be paid to the producer is required by the public interest.

Area prices are also relied upon to some extent in appraising producer applications for rate increases in § 4 (e) cases. If the rate increase is relatively small, say one-half cent or one cent per Mcf, and the total rate after giving effect to the increase is in line with prevailing prices, the commission may be expected to approve the increase without requiring substantial cost-of-service and financial requirements evidence. On the other hand, if the escalated price pierces the area price plateau, the commission will undoubtedly suspend the increase and withhold final approval unless and until the independent producer can make a satisfactory showing that both cost of service and the increment above cost of service are required in the public interest.

Is Regulation Driving Gas Out of Interstate Commerce?

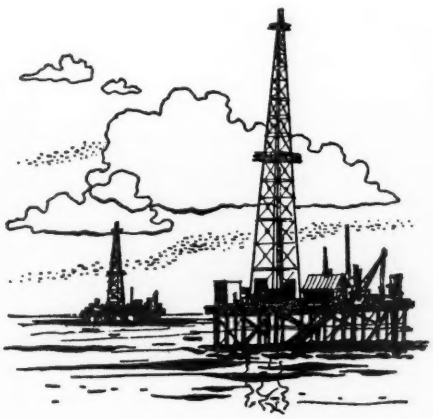
How about the reports we hear from time to time that FPC regulation is causing a diversion of natural gas from the interstate market to the intrastate market to avoid the burden of federal control?

It must be conceded that since the beginning of federal regulation there have been some diversions of gas from the interstate market to the intrastate market. However, the supply of gas in the producing states is much greater than can be absorbed in their own intrastate markets.

Futhermore, there is no reason to believe that the FPC is unaware of the importance of regulating pipelines and producers in such a way as to encourage continued new dedications of gas to the interstate market.

It has been almost a traditional pattern, when the burden of regulation is first proposed or threatened to be imposed, for business enterprises to resist such regulatory jurisdiction and to do everything possible to regain the freedom and managerial discretion enjoyed prior to the passing of regulatory legislation. This is both human and understandable. But there can come a time when it can also become futile. Once management recognizes that regulation is here to stay, it becomes prudent to explore how best to live and prosper within the regulatory orbit.

It is this writer's opinion that the best brains of the natural gas producing



industry should concentrate on how to make regulation work. If industry assists government, in its proper exercise of the regulatory function, a great deal of progress can be made. The American Telephone and Telegraph Company is a conspicuous example of a prosperous and growing enterprise under regulation. The major electric utilities in the country are another example of how an industry can make money for its stockholders, expand its service, and grow at an astonishing rate, notwithstanding the disciplinary restraints of regulation. An affirmative approach is always much better than a negative one.

THERE have been several developments in recent months indicating that independent producers are indeed taking an affirmative approach and seeking to bring their contractual practices into alignment with objectives favored by the FPC. For example, there have been numerous instances of contract renegotiation designed to eliminate spiral escalation and favored-nation clauses, substituting instead fixed, periodic step-up increases. Another development has been far more detailed and comprehensive preparation of evidence by producers in both rate and certificate cases.

There are great financial stakes involved in the fixing of initial prices and in the decision to approve or deny requests for rate increases. Hundreds of cases are now pending, involving millions of dollars.

In most of these cases the proceeding has been an adversary type proceeding. In such a proceeding the producer seeks the increase while the pipeline either maintains neutrality or opposes the increase, and the distributing companies usually oppose.

Negotiated Settlement of Rate Cases

THE complex economic and engineering questions involved in a typical rate proceeding are not such as can best be illuminated by adversary proceedings. The resolution of many of these difficult questions requires an informed judgment by the regulatory commission. Such administrative regulatory cases are entirely different from ordinary criminal or civil cases before a court. Accordingly, devices such as pretrial conferences and settlement conferences provide a means for obtaining full and free discussion and exposure of the differing points of view of the various parties. Such conferences involve arbitration and compromise rather than arm's-length controversy, and are more likely to result in a balanced and universally accepted conclusion than will the long-drawn-out controverted cases.

An outstanding example of the advantages of the settlement procedure can be seen in the case of Union Oil Company of California (Docket No. G-4331) et al. This was the first major independent producer case in which the FPC accepted as "in the public interest" an offer of settlement. This offer of settlement had been agreed to by the majority of the parties concerned—Union Oil Company of California, Louisiana Land & Exploration Company, Transcontinental Gas Pipe Line Corporation—to whom these two producers sell gas produced in various parishes in southern Louisiana, and the principal utility customers in the states of

New York, New Jersey, and Pennsylvania, who are supplied by Transco.

THE case started back in 1954, when the two producers asked FPC for a rate change from 8.797 cents per Mcf to 16 cents per Mcf, plus a one-cent tax reimbursement. The proposed increase amounted to approximately $2,465,000 per year. The commission suspended the increased rates but permitted them to go into effect subject to refund on February 1, 1955. The collection of rates, subject to refund, went on for about four and a half years. Hearings were first held during the year 1955. Late in 1956 (FPC Opinion 300),[16] an examiner's decision, holding that the producers had failed to make a proper showing justifying the proposed increases, was affirmed. Union Oil and the affiliated producers appealed to the fifth U. S. circuit court of appeals, which sustained the commission in part but sent the case back for more evidence.

There followed extensive settlement negotiations between the producers and representatives of the gas distributing companies. As a result of these negotiations, an agreement was reached providing, among other things, for a 15-cent rate rather than a 16-cent rate during the period from February 1, 1953, through July 31, 1959; and a 16-cent rate beginning August 1, 1959. In support of the increased rates, the producers submitted cost data showing the cost of service under various alternative cost allocation methods.

As a part of the settlement, the gas producers also agreed to make available to Transco and its customers an additional 50 million cubic feet of gas daily. Finally, the producers agreed to eliminate the indefinite pricing provisions from their contracts.

IN its order accepting the settlement, issued January 13, 1960, the FPC stated that "it would be beneficial to the public and advantageous to all concerned, by relieving the commission, the producers, and Transco, as well as customer companies, of the time and expense which might be necessary to the conduct of formal proceedings in such rate cases as might otherwise arise under the favored-nation clauses, and all such indefinite escalation clauses should be eliminated from producer contracts as they have been from pipeline rate schedules."

In a separate concurring statement, Chairman Kuykendall said that the settlement should be approved not merely because an agreement had been reached between the buyer and seller but "because we also have the competent favorable recommendation of customers of the buyer, all buttressed by cost analyses which satisfactorily support the results we now approve."

THE commission did not select and give its approval to any one of the several methods of cost allocation presented by Union Oil in support of the settlement agreement. However, the commission did determine that the cost evidence before it was sufficient to demonstrate that the proposed settlement rates were "just and reasonable." In this particular matter Chairman Kuykendall stated: "I wish to make it clear that I do not, at this time, commit myself to the rate base method of fixing gas producers' rates, nor do I believe the commission should deliberately confine itself to such a restricted path if the law does not require it."

The successful settlement of the Union Oil Company of California rate case points the way to many more constructive producer case settlements in the future. The gas industry must be considered as a single integrated whole if it is to continue to serve its great economic and social purpose. Even though different corporate entities are found engaged in the production, transportation, and distribution phases of the industry, they must work together co-operatively to assure their individual and joint success. The divisiveness that has arisen in highly controverted certificate and rate cases before the FPC should not become a typical pattern. There are inevitably differences of interest, but these are not beyond reconciliation.

ONE final aspect is worthy of mention. During settlement negotiations, the distributor learns a great deal about the problems of the producer, and the producer has an equal opportunity of becoming better informed with respect to the problems of gas distribution.

Footnotes

[1] Phillips Petroleum Co. *v.* Wisconsin (1954) 347 US 672, 3 PUR3d 129, in which the majority held (5-3) that independent producers were subject to the FPC rate-making jurisdiction under the act.

[2] Re Pan American Petroleum Corp. (1958) 23 PUR3d 176, which allowed gas supply prices to Cities Service Company to be increased from 7.5 to 8.5 cents per Mcf. See also Re Shamrock Oil & Gas Corp. (1959) 31 PUR3d 84.

[3] City of Detroit *v.* Federal Power Commission (CADC 1955) 11 PUR3d 113, 230 F2d 810.

[4] Federal Power Commission *v.* Hope Nat. Gas Co. (1944) 320 US 591, 51 PUR NS 193, in which the court ruled that if the "end results" of rates fixed by the FPC were sufficient to meet the gas companies' overall financial and revenue requirements, the court would not interfere with the theory or method employed to arrive at that result.

[5] Forest Oil Corp. *v.* Federal Power Commission (1959) 28 PUR3d 159, 263 F2d 622.

[6] The hearing in the latest consolidated proceeding commenced on June 26, 1956, and was closed on December 18, 1957. It took eighty-two hearing days and the record comprises 10,620 pages of transcript and 235 exhibits. The examiner's decision, which was issued April 6, 1959, runs to 317 pages.

[7] Re El Paso Nat. Gas Co. 29 PUR3d 469, 480.

[8] The keystone of the "fair return" doctrine is found in two leading U. S. Supreme Court cases: Smyth *v.* Ames (1898) 169 US 466, as modified by the more recent Hope Natural Gas Company case (1944) 320 US 591, 51 PUR NS 193. In both of these decisions the owners of property devoted to regulated business are assured some measure of constitutional protection from confiscation.

[9] For example, in the case of Columbian Fuel Corporation, Docket No. G-12,487, the presiding examiner issued a decision on December 3, 1957, in which he refused to condition the authorization to provide for a rate no higher than 21 cents per Mcf, as had been recommended by the FPC staff.

[10] 29 PUR3d 70.

[11] The court went on to say that "It is true that the act does not require a determination of just and reasonable rates in a § 7 proceeding as it does in one under either § 4 or § 5. Nor do we hold that a 'just and reasonable' rate hearing is a prerequisite to the issuance of producer certificates. What we do say is that the inordinate delay presently existing in the processing of § 5 proceedings requires a most careful scrutiny and responsible reaction to initial price proposals of producers under § 7. Their proposals must be supported by evidence showing their necessity to 'the present or future public convenience and necessity' before permanent certificates are issued. This is not to say that rates are the only factor bearing on the public convenience and necessity, for § 7(e) requires the commission to evaluate all factors bearing on the public interest. . . . Where the application on its face or on presentation of evidence signals the existence of a situation that probably would not be in the public interest, a permanent certificate should not be issued."

[12] This was a case involving the sale of a very substantial quantity of gas to Transcontinental Gas Pipe Line Corporation (Transco) by twenty-six producers having reserves in southern Louisiana and the Gulf.

[13] 4 L ed 2d 237.

[14] Re Phillips Petroleum Co. 31 PUR3d 245.

[15] Re Transwestern Pipeline Co. 30 PUR3d 181.

[16] Re Union Oil Co. of California, 16 PUR3d 112.

". . . the men who, as the President put it, very flatly refused to take care of our long-term financing are not easily amendable to education. What they specifically refused was to lift the interest rate ceiling on longer-term government bonds, with the result that the Treasury cannot market such issues and must confine itself to inflationary short-term financing.

"The trouble is that some of these lawmakers behaved as they did not as a result of reasoned debate but out of purely doctrinaire preconceptions. Cheap money is for them a fixation (it has political overtones too, of course, since they think that is a popular position), and they will talk all around Robin Hood's barn in their efforts to avoid the facts.

"Not by coincidence, such men are also convinced that the government can go on forever living far beyond its means, that huge continual deficits are harmless, that the main purpose of government is to increase spending regardless of anything else. It is this attitude, reflected in enormous and extravagant federal spending, which is the root cause of the developing fiscal crisis.

"Though it is always difficult to open closed minds, we hope more and more people will try to apply the heat of truth. We also hope these members of Congress will feel the heat before inflationary fires are burning brightly all around them."

—EDITORIAL STATEMENT,
The Wall Street Journal.

Trending Utility Plant Costs

By ERNEST C. NORTH*

The author makes a case for the adoption of trended cost as a method for utilities to use as a basis for their rate of return. He believes regulatory commissions should give greater attention to present-day value. Fair value states have increased to 16, he points out, and one state supreme court has interpreted fair value as meaning present value.

WOULD the reader of this article rent his house in 1960, for which he paid $10,000 in 1939, on the basis of this original cost less all elements of depreciation? Would he sell the house today for $10,000 less depreciation? The answer to both questions is obvious. In America we are entitled to and expect a return on the "value" of that which we own and such "value" is defined as the reconstruction cost new today, less all elements of depreciation. What is the reconstruction cost new of our house today? An estimate based on a reliable index series indicates that the cost would be 2.9 times its original cost, or $29,000. In other words, our 1939 brick residence construction dollar has diminished to 34 cents.

An old rule of thumb, used by many realtors, says that a house should rent for an amount that equals the value of the house in ten years, assuming ten months' rent per year. In other words, the rent should equal its value in one hundred months.

ON this assumption, and also assuming a 50-year expected life of our brick residence, let us illustrate the financial position of the owner on both the original cost and reconstruction cost new basis. For simplicity we have overlooked taxes, maintenance, and some elements of depreciation (such as neighborhood changes).

In both illustrations we have assumed a straight-line depreciation of 2 per cent per year.

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	Original Cost Base	*Reconstruction Cost Base*
Costs	$10,000	$29,000
Depreciation (21 Yrs. @ 2% Per Yr.)	4,200	12,180
Values in January, 1960	$ 5,800	$16,820
Monthly Rent (Value—100 Months)	$ 58	$ 168
Yearly Rent (Ten Months)	$ 580	$ 1,680
Rate of Return	10%	10%

But what is the rate of return on present value if rented on basis of original cost—$580 + $16,820 = 3.4%—and remember that we are not considering taxes, insurance, and depreciation in this study? If we did consider them, our rate of return would be greatly reduced. Obviously, our owner who rented his house in 1960 on the basis of original cost depreciated is fast headed for bankruptcy. Is his position any different from that which faces many of our utilities because of regulatory bodies' insistence on a meager rate of return on depreciated original cost?

Higher Rate of Return Impractical

PROPONENTS of the original cost rate base for utilities constantly dodge the issue by saying that the rate of return should be raised to adjust for the changes in the value of the dollar. Take another look at our house owner. To get the dollars he needs on an original cost rate base, the rate of return would be $1,680 divided by $5,800 or 29 per cent. Is there any record of a major utility being permitted to raise its rate of return 2.9 times to compensate for the decline in the value of the dollar? Of course there is not, because such action would not be politically expedient.

PROPONENTS of the original cost rate base also argue that a reconstruction cost new rate base is subject to error because such a base must be estimated and is therefore subject to judgment. There was some justification for such objection to reconstruction cost prior to the time that index numbers tailored to utility properties became generally available. On this subject the supreme court of Iowa, in an opinion dated September 17, 1957, in the case of Iowa-Illinois Gas & Electric Co. *v.* City of Fort Dodge et al.,[1] said in part:

> In the determination of a property valuation, possibly any method is susceptible to some attack and criticism.
>
> The arguments against fair value are all ones of expediency, not ones of justice or fundamental fair treatment. It is obvious that fair value introduces certain problems of proof. There must be estimates of reproduction cost, and of course these are by necessity estimates, but they are estimates of the cost of a plant in existence. They are close enough for practical purposes, and are obviously more likely to be reasonably correct than contractors' estimates of a plant to be built, on which estimates of billions of dollars have been and will be spent.
>
> Furthermore, with the complete bookkeeping records now kept, it is not too difficult or expensive to apply trended percentages to original cost and thereby obtain a trended original cost, which will serve as a very accurate guide to the general effects of inflation, over the life of the property—or, as the case may be in some instances, deflation. . . .

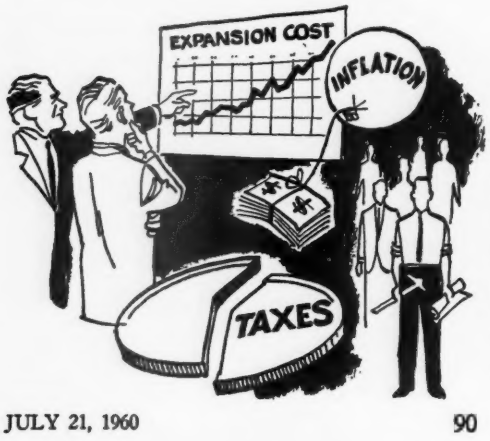
[1] 20 PUR3d 159, 177.

The Iowa supreme court further stated:

> . . . The original cost of a piece of real estate or property sixty years old is obviously not a sound basis for judgment of value today, and is obviously far more out of line than any estimate of reproduction cost or of trended original cost. These criteria are also far more definite and clarifying than the vague and indefinite "end result."

And further the court said:

> There is perhaps another objection to value being fixed at original cost alone which we should mention. It is not to the community's advantage to keep such vital necessities as public utility services in a regulatory strait jacket. . . . New and better equipment will, of course, result in better and more progressive service to the community. Extensions will aid in the city's growth. But with industrial measuring, regulating, and transporting equipment doubled in price, will the management be encouraged to go forward or be content to let obsolete and inefficient equipment continue in operation until it fails or reaches its fully paid-for status? Such service is not likely to be less costly to the customers. . . .



Some Other Opinions

MANY other courts and regulatory bodies have had much to say on this question. In an opinion dated December 9, 1957, in the case of State of Missouri ex rel. Missouri Water Co. *v.* Missouri Public Service Commission et al.[2] the Missouri supreme court said in part:

> It is true that determination of "fair value" for rate-making purposes involves vexing problems of proof. Estimates of reproduction costs or other elements necessary to ascertainment of "fair value" frequently are given from a partisan standpoint and often are unsatisfactory. In this connection, however, it seems that once original cost is ascertained modern bookkeeping methods used in connection with recognized trending percentage tables and price indices can be used to establish both reproduction costs and depreciation with reasonable accuracy. The evidence in this case tends to so show, as do the findings in many of the recent cases involving these questions. . . .

IT is interesting to note that the Province of Alberta, Canada, is also giving consideration to trended original cost. The Board of Public Utility Commissioners of Alberta in a decision dated March 4, 1959, in the matter of an application by Canadian Western Natural Gas Company to change rates, said in reference to "trended cost":

[2] 22 PUR3d 254, 271.

It is not necessary for the purpose of this decision to examine in detail the calculations made. Suffice it to say that in the opinion of this board the method used is superior to the reproduction cost appraisal method. The latter method has often been criticized as being too expensive, susceptible to many inaccuracies, and time consuming. While the trended cost method is undoubtedly subject to some inaccuracies, it appears to the board to represent a more accurate expression of value in terms of dollars at a subsequent date certain than can be obtained by any other method that has come to the attention of the board.

Numerous other citations of courts and regulatory bodies could be given as the number of "fair value" states has now increased to at least sixteen. Five have recently joined the list—Alabama and New York in 1955, Texas in 1958, and Missouri and Minnesota in 1957. The Texas supreme court in 1956 interpreted "fair value," to mean "present value."[3]

Determining Present Value

HEEDING present value, how do we arrive at it? There are only two methods of finding reproduction cost new. One is by making a complete inventory of the plant and then to reprice this inventory by application of proper present-day unit prices. This method is similar to that used by construction contractors in preparing a bid for work to be constructed. It is a time-consuming and costly method of doing the job. It is subject to many errors; first, in the recording of the inventory; secondly, in the application of unit prices to the inventory; and, thirdly, in the addition of proper overhead costs and profit. However, if carefully prepared by experienced engineers, the result will be approximately correct.

This was generally the only method used to find the reproduction cost new of utility plant prior to the year 1922.

THE second method of finding reproduction cost new is by the trending method. In 1922 the late William W. Handy, a consulting engineer of Baltimore, gave testimony for the Consolidated Gas, Electric Light & Power Company before the Maryland Public Service Commission on the use of index numbers for trending the original costs to present values. He used a series of index numbers specifically constructed on company experience. To our knowledge this was the first use of specific index numbers in a utility rate case.

Between the years 1922 and 1935 the trending method was used in many cases, particularly in the central and eastern portions of the country, but during this period the trending method was not received with great enthusiasm. Then in 1935 the United States Supreme Court, in the case of West et al. *v.* Chesapeake & P. Teleph. Co.,[4] gave the first authoritative ruling on the proper use of indexes in valuation proceedings: The court set aside the commission's appraisal because it was based on the application of an empirically weighted average of some 16 construction cost indexes to the historical cost of the property. However, the court stated: "This is not to suggest that price trends are to be disregarded; quite the contrary is true." In

[3] Texas Railroad Commission *v.* Houston Nat. Gas Corp. 13 PUR3d 90.

[4] 295 US 662, 8 PUR NS 433.

other words, the court apparently said that index numbers must be applicable to the type of plant being trended.

Use of Index Numbers Proved

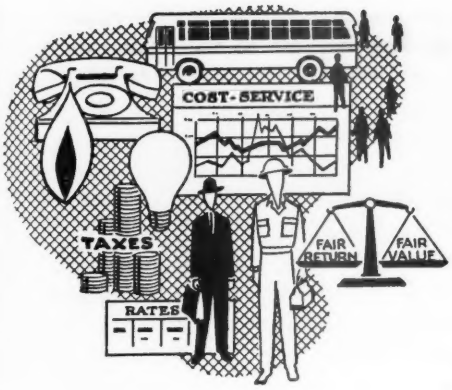
SINCE 1935 the use of index numbers for trending public utility plant costs has been on a steady increase. It has been proved many times, in many states, that the degree of accuracy obtained by using proper index numbers for trending original costs produces a result equally as accurate and in most cases more accurate than a repriced inventory type of reproduction cost new estimate. And the cost of doing a proper trended valuation is only one-tenth to one-thirtieth of the cost of doing a repriced inventory valuation. As recently as June 19, 1959, the Montana Public Service Commission, in an order in the Great Falls Gas Company case,[5] Docket No. 4693, said in part:

> Applicant's trended original cost valuation was computed by applying cost indices to the original cost of various items of plant. Indices were taken from the Handy-Whitman Index of Public Utility Construction Costs, long recognized as an authoritative publication on cost trends. The Handy-Whitman indices were applied in three classes of property, structures and improvements, pumping and regulating equipment, and services. Special indices were prepared for the three other classes of plant property trended, mains, meters and meter installations, and house governors and governor installations. These special indices were formulated by an associate engineer for Whitman, Requardt and Associates, the firm which publishes the Handy-Whitman Index. We are satisfied from the evidence that the indices provide a high degree of accuracy for the trending, or translation, of these costs into "present-day" dollars. . . .

THERE are now many systems of index numbers maintained monthly, semi-annually, or annually, which are applicable to various types of engineering construction. The *Engineering News-Record* magazine has for many years published a Building Cost Index and a Construction Cost Index. The application of each is fully explained in its "cost edition," the latest of which is March 24, 1960. These *Engineering News-Record* index series have proved to be very accurate as to direction of trend and reasonably accurate as to magnitude of trend. Among others that have been long established are the U. S. Bureau of Public Roads' Indexes, Industrial Equipment Cost Indexes by Marshall & Stevens, Inc., of Chicago, Building Cost Index by American Appraisal Company, and Railroad Cost Indexes by the Interstate Commerce Commission.

In conclusion we wish to state that we are of the opinion that regulatory authorities must and will give greater recognition to present-day value. If they do not do so, our utilities, like our house owner renting his home today on the basis of original cost less depreciation, will be fast on the road to bankruptcy.

[5] 29 PUR3d 237, 244.



Important Concepts As to Fair Return And Cost of Money

By RALPH E. BADGER*

The fair rate of return problem is an integral and important phase of the entire regulatory process, and is involved in nearly every case in which the determination of utility rates is a question.

Recent Regulatory Results

LOOKING at the broad results of utility regulation over the past generation, it is gratifying, as an economist, to observe that there has, on the whole, been a *reasonable* balancing of the interests of the utility on the one hand, and of the consumer on the other hand.

In any event, no important segment of the utility industry appears to have suffered too badly because of an inadequate allowed return. Capital has been available for expansion in adequate amounts. Nearly all utility securities are well rated investmentwise. Those segments of the industry, such as transportation, which have not done well, have suffered from competitive and other ills not subject to regulatory correction.

On the other hand, rates for all important commodities and services furnished by the utility industry, in general, have been kept within very reasonable limits during a period of rapidly advancing commodity prices and wages, thus protecting the consumer.

IN the last analysis, this balance has resulted from the thoughtful and patient efforts of the various regulatory commissions to hear and to weigh the voluminous evidence which has been placed before them in cases requiring "fair rate of return" determination.

This discussion is devoted to a few of the more important and somewhat perplexing problems which are involved in the determination of "cost of capital" and "fair rate of return" in the hope of clarifying some of the significant issues involved in a field whose problems are never subject to precise, mathematical solution.

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Historical Earnings Rates

IMPORTANT segments of the utility industry have achieved their present status of investor acceptance on the basis of their historical level of past earnings; that is, their past earnings record. Using five-year averages, the rates at which various segments of the industry have earned on their capital investment may be summarized, as follows:

Type	*Per Cent Earned On Average Total Investment*	*Per Cent Earned On Average Common Stock Investment*
Electric Utility Companies ...	6.11%	10.70%
Gas Distribution Companies ..	7.90	13.14
Natural Gas Pipeline Companies	6.59	14.59
Water Companies	5.60	9.35

The capital structures of the preceding classes of utilities tend to show some variation. For example, the common stock component of the electric utility (light and power) segment is currently about 36 per cent of total capital; of the gas distribution segment, 41 per cent; natural gas pipeline, 29 per cent; and of the water segment, 39 per cent. The per cent earned on the common stock component of given segments of the utility industry is a function of the overall rate of return and the per cent of common stock to total capital. Thus, the relatively high rate earned by pipeline companies on their common stock equity results partly from the low ratio of common stock to total capital and a relatively high rate of earnings on total capital structure.

IT is not to be inferred, per se, that the past earnings rate of a given utility or of the industry is a proper guide to "cost of capital" or to the "fair rate of return" which a utility should be allowed in the future. However, it must be borne in mind that investors who have supplied capital to the industry in the past have no doubt been influenced in their decision by the past performance of each segment of the industry, and the rates at which they have been willing to supply large amounts of debt and equity capital to the industry have been influenced, in no small degree, by the historical performance of the industry.

There is, therefore, some basis for urging at least an examination of current ratios of earnings on the book value of overall capital investment and equity investment of appropriate groups of utilities in arriving at a rate of return determination for a given utility. Furthermore, such comparisons appear to be in line with the famous Bluefield and Hope decisions of the Supreme Court.

Recent Industry Growth Experience

LET us examine, briefly, what this historical earnings rate has provided. Most importantly, it has provided *growth* —and reference is here made to investor growth, not mere service growth. A differentiation should be made between these two types of growth. *Investor growth* is the type of growth that spells a gradual increase over the years in per share book value, earnings, and dividends for the common stockholder of a company, after proper allowance has been made for stock splits and stock dividends, if any. *Service growth* refers to the success of a company in increasing energy output, serving more customers, and may

frequently be measured in terms of operating revenue increases. This latter type of growth may or may not benefit the stockholder or investor.

If additional capital from outside sources is doubled for the purpose of doubling operating revenues and net, the percentage return to the original investor remains constant. If, on the other hand, the utility earns a satisfactory return on its investment, pays out a reasonable portion of earnings as dividends, and reinvests a portion of its earnings each year, the stockholder's original investment grows and, over a period of years, earnings and dividends on his original investment increase.

In general, investor growth and service growth go hand in hand to produce a satisfactory situation for both the investor and the ratepayer. Let us examine specifically the extent to which growth has affected the utility industry: In a brief period of ten years, 1949-58, net utility plant in the electric utility segment of the industry increased from $15.5 billion to $43.5 billion, while total kilowatt-hour sales increased from 208.3 billion to 440 billion. Net plant invested in the natural gas pipeline industry rose from $1.7 billion in 1949 to $6.3 billion in 1958. Revenues likewise showed a satisfactory percentage increase. An even more spectacular growth was recorded by the telephone industry. These figures all measure service growth.

Now, it would obviously be unfair if this service growth had not, in part at least, been accompanied by investor growth. An examination of the facts indicated that it was. Thus, on an adjusted share basis, earnings of the utility stocks in Standard & Poor's Daily Price Index amounted to $1.71 a share in 1949; $2.33 a share in 1958. Dividends increased from about $1 a share, on average, to about $1.65 a share.

Based on comprehensive studies which have been made, it appears that per share earnings of electric utility stocks, over the past ten years, have shown a compound annual growth at a rate of 2.9 per cent; natural gas distribution companies, 6 per cent; and natural gas pipeline companies, 8.8 per cent.

Growth Related to Investor Acceptance

It is important to understand the two factors which generate investor growth. These are (1) the rate of earnings on book value of common stock investment, and (2) dividend pay-out ratio. The electric utility industry has averaged to earn 10.7 per cent on the book value

of its common stock capital and has paid out about 72 per cent of earnings as dividends. Thus, $100 of book investment each year has earned $10.70, of which 28 per cent has been reinvested in the business. As long as this set of conditions prevails, a typical company in the industry may be expected to compound its earnings per share at a rate close to 3 per cent.

The evidence appears clear that investors, in determining the basis on which they supply capital to the utility industry, are guided to a very considerable extent by these general measures of performance. This applies particularly to common stock capital. For example, electric utility stocks currently sell at earnings-price ratios not far from 6 per cent, and at current dividend rates of about 4 per cent. New issues of high-grade electric utility bonds are now selling to yield in excess of 5 per cent. The question arises: Why are investors willing to buy the common stock of a company at a 4 per cent current dividend yield when they can get 5 per cent on capital invested in high-grade bonds of the same company? There is only one answer: The bond return is fixed and constant, whereas the current dividend payment on the company's stock is expected to increase at an annual compound rate of 3 per cent.

Growth Requirements

ONE may ask, "What is the significance of these facts to the problem of 'rate of return'?" First these facts are of paramount importance and explain the fallacy of the technique known as "application of the earnings-price ratio as a determinant of the cost of common stock capital."

Frequently a rate of return determination is based on a cost-of-capital determination. In its simplest form, cost-of-capital determination involves (1) a calculation of the annual cost rate applicable to fixed-charge capital (bonds and preferred stock), (2) a calculation of the annual cost applicable to common stock capital, and (3) averaging of these two cost rates into a composite or overall capital cost on the basis of an actual or an assumed capital structure.

THE problem of determining costs of fixed-charge capital is relatively simple. Determination of the cost of common stock capital is much more complex and involves not only a determination of the cost rate to be used, but the amount of common stock capital properly to be provided for in the capital structure.

A frequently employed method of determining the cost rate applicable to common stock capital involves determining, for a group of barometer companies, a so-called earnings-price ratio. Such a ratio is obtained simply by dividing annual per share earnings by average per share prices, with the resulting figure adjusted for selling costs and sometimes "pressure." Thus, if a utility is earning $2 per share and sells at $30, the earnings-price ratio is 6.6 per cent. This ratio, adjusted for the underwriting and corporate costs of issuing new common stock, is then assumed to be the cost to the subject company of obtaining common stock capital. This imputed cost rate then enters significantly into the determination of overall capital costs and "fair rate of return."

IMPORTANT CONCEPTS AS TO FAIR RETURN AND COST OF MONEY

THE fundamental error in the earnings-price ratio approach is simply this: The earnings-price ratios at which utility stocks are currently selling are predicated on an assumed continuation of their past growth rate, and their past growth rate is in turn dependent upon the historical rate at which they have been earning on common stock capital as well as their dividend pay-out ratio. How true this is has already been emphasized by examining the facts currently surrounding the electric utility industry. And the same general forces are present in respect to other types of regulated utilities.

The electric utility industry, on a composite basis, during the recent past, has earned at a rate of 10.7 per cent on its common stock equity, and has averaged to pay out 72 per cent of earnings as dividends. The annual past growth rate, as well as future or anticipated growth rate, in earnings, therefore, is approximately 3 per cent. If now the future earnings rate for the industry were to be reduced from 10.7 per cent to say 7.4 per cent (which is the current *industry* earnings-price ratio of 6.6 per cent adjusted for an assumed selling cost of 10 per cent), dividends, which are now running at a rate of $7.70 per $100 of common stock book value, would have to be reduced to $5.33 per $100 of common stock capital (assuming a constant pay-out ratio), and the annual compound industry growth rate would be reduced from 3 per cent to about 2 per cent per annum.

Under this set of conditions, investor appraisal of electric utility company common stocks would radically change, and a new and significantly higher earnings-price ratio would develop, since the attractiveness of electric utility stocks, under these new conditions, would be significantly less. In other words, if earnings-price ratios are of themselves determined by the past rates at which utility companies have earned on their common stock capital, how, logically, can these ratios now be used to regulate the rate at which utilities should earn on their common stock in the future?

It is apparent at this juncture that the problem of determining the proper cost rate to apply to the common stock component of a utility in arriving at an overall cost of capital and fair rate of return is a far more complicated problem than can be solved by the type of arithmetic involved in computing earnings-price ratios.

The cost of common stock capital to a utility company, electric, water, or gas, is a rate that will provide for a reasonable pay-out ratio and a reasonable growth rate. A sustained growth rate has been the basis on which important segments of the utility industry have financed their past capital requirements. The industry will need this growth rate in the future to assure its ability to acquire the necessary capital for future requirements. It can be definitely stated than an allowance for common stock earnings based on or calculated by reference to the earnings-price ratio approach will not provide for such a rate of growth.

The investment growth rate to be provided does not have to match the 10 per cent to 12 per cent achieved by many successful industrial enterprises. On the other hand, a lower rate of investment growth than that shown by the utility industry during the past decade does not appear advisable at this juncture. Capital requirements for major segments of the industry will remain heavy for some years to come, and utilities will be required to raise their future common stock requirements in competition with nonregulated industries.

The return and concomitant growth rate allowed the utility industry should reasonably equate with that experienced by the industry and by unregulated industries, after proper allowance for variations in risk. And herein lies the field from which proper data and facts may be drawn to determine the cost of equity capital.

Inadequacy of Adjusted Earnings-Price Ratios

Another theory that has found some acceptance among experts who delve into rate of return matters requires attention at this time. An examination of this problem here is a little belated, since it follows the previous criticism of the use of earnings-price ratios as a measure of common stock costs. The device to which reference is here made is an *adjusted earnings-price ratio,* adjusted in fact for dividend pay-out ratio. The theory underlying this device is that the higher the dividend pay-out ratio the lower the earnings-price ratio. Thus, if two companies are alike in all respects, except that one pays out 90 per cent of earnings as dividends, the other 70 per cent, the first company will sell at a lower earnings-price ratio than the second company.

Adherents of this theory thus avoid the use of an average earnings-price ratio for a group of barometer companies as a measure of common stock capital, but, rather, attempt to construct a trend line through data for an entire group of barometer companies to determine, say, an applicable earnings-price ratio associated with an assumed 80 per cent to 90 per cent pay-out ratio. In this way, a computed earnings-price ratio below the

group average is arrived at, and adherents of this theory urge that this computed earnings-price ratio be used to determine the cost of common stock capital.

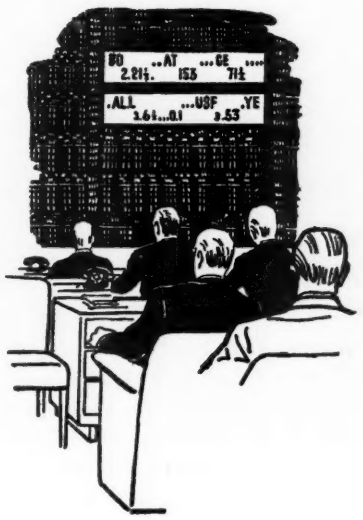
THIS technique is, of course, based on an assumed dividend pay-out ratio much higher than the industry ratio and, if followed, results in a direct interference with the function of management. Obviously, to achieve the assigned costs of capital under this theory, the regulated company must adopt the dividend pay-out ratio used by the commission. The regulatory commission, by following the general theory here involved, thus, in substance, usurps management's function of determining dividend policies. In addition, by requiring a high pay-out ratio, investor growth is completely eliminated. The general theory of determining the rate of return for a utility by the use of an earnings-price ratio *adjusted for an assumed dividend pay-out ratio* is thus doubly repugnant.

Capital Structure

IN following the orthodox method of determining "cost of money" and "fair rate of return" it is customary practice, after having determined cost rates for different types of capital, to combine rates on the basis of an assumed capital structure into an overall cost rate, which in turn is used as one of the factors to determine "fair rate of return."

There is a very definite question whether the fair rate of return should vary with capital structure. In other words, assume two utilities alike in all respects except capital structures. Obviously, there is no difference in total operating risk or so-called enterprise risk. Capital structure is merely a device for distributing this total risk among different classes of security holders. Increasing fixed-charge capital has the effect of increasing stockholder risk and so-called leverage; decreasing fixed-charge capital lessens stockholder risk and lessens the effects of leverage.

THE common stockholder of a company with a heavy debt component is thus entitled to a higher return on his portion of the capital structure, but this need not result in a higher overall capital cost, since the fixed-charge, lower-cost type of capital becomes proportionately greater and permits the common stockholder to get his higher rate of return on his lower component at no greater cost to the ratepayer. Any other approach denies the common stockholder the advantage of higher leverage to which he is entitled by virtue of the greater risk to which he is now subjected.



A REVERSE situation develops in the case of a utility with a very low percentage of debt in its capital structure. Even though the return allowed on common stock is properly reduced, to account for lower risk, and the weighted average overall return is not changed, the ratepayer may be penalized, not by virtue of a higher rate of return allowed the company, but for other reasons. In such cases, a part of the tax saving associated with debt capital is lost, higher taxes must be provided for in the cost-of-service formula, and a higher aggregate tax cost must be contributed by the ratepayer.

Quite properly, in such cases, commissions frequently normalize the utility's capital structure for rate-making purposes, and insist that the cost-of-service formula absorb only the taxes that would hypothetically have been paid if the utility had had a debt component in its capital structure approaching some ideal percentage, generally approaching the industry average. If reasonably used, such an adjustment appears appropriate.

Fair Value Rate Base Problems

THE law, as well as prevailing practices, varies between jurisdictions in respect to the determination of rate base. Fundamentally, there are two approaches to rate base determination, one based on the depreciated original cost of the property dedicated to utility service, the other based on the fair value of such property. This comparatively simple delineation will serve our purposes here, even though there are, in fact, further refinements as between jurisdictions as to precisely how the rate base should be computed.

An "original cost, less depreciation" type of rate base will generally approximate the total investment or capital structure of the utility under regulation, whereas a "fair value" rate base will involve an adjustment to bring original cost of a utility's property up to a figure more clearly approximating its present reproduction cost, less depreciation.

The move from "original cost" to "fair value" is, of course, designed to protect the corporation against a loss in the purchasing power of its invested dollars.

IF the fair value rate base is to protect the corporation against a loss in the purchasing power of its investment, it appears logical that the same fair rate of return that would apply to an original cost rate base should be applied to a properly determined fair value rate base, otherwise the fair value concept fails to achieve its original purpose. In other words, if 6.5 per cent is considered a fair return on original cost, the assumption is that each $100 of original investment (and, inferentially, rate base) is entitled to earnings of $6.50. If a fair value rate base is, say 120 per cent, higher than an original cost rate base, the assumption logically follows that the corporation's original dollars have depreciated by $16\frac{2}{3}$ per cent to $83\frac{1}{3}$ per cent of original value and that it should be compensated for this by being permitted to earn more depreciated dollars.

If the fair value rate base is set at a level 120 per cent above original cost, but the return *in terms of dollars* is held constant—that is, if the 6.5 per cent return is reduced by $16\frac{2}{3}$ per cent to 5.41 per cent—the corporation earns the same dollar return on the previously calculated fair value rate base as 6.5 per cent would re-

turn on an original cost rate base. Whatever return is allowed between 5.41 per cent and 6.5 per cent, in such a case, will thus only partially accomplish the purpose of adopting the fair value rate base. In order to achieve the full objective of adopting a fair value rate base, the fair rate of return, therefore, should not differ from that which would be applicable to an original cost rate base.

Cost of Capital *v.* Fair Rate Of Return

THE last point to be considered here involves the part played by cost of capital in a fair rate of return determination. Cost of capital determines a floor, below which rate of return is so low as to become confiscatory. Fair rate of return is generally above this floor, delineated by cost of capital. If a utility cannot recover its capital cost, it cannot continue indefinitely to serve the public and, per se, present investors in the enterprise will suffer the loss of all or a part of their investment.

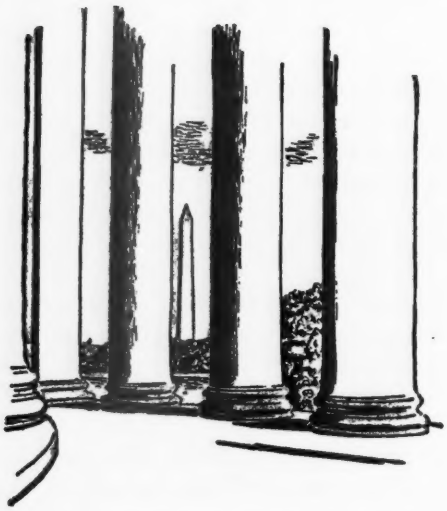
In fact, even if fair rate of return is set at the cost-of-capital level, it is an inexorable fact that during a long period of constantly rising prices, such as we have been in and are in at the present time, the actual return earned by the utility will fall below the cost of capital. Rising costs of operation have an almost immediate effect in eroding profit margins, and the formula for determining cost of service becomes outdated almost before it becomes operative.

RATE cases are not filed every day, or even every month. The utility usually waits until return has fallen to a dangerously low level before another request for higher rates is filed. During a considerable period, therefore, the return actually earned is below the level of fairness, frequently within the range of confiscation. Revenues lost during this period are rarely if ever recouped, particularly since past losses cannot properly be provided for in future rates. In the interest of fairness, therefore, a return allowance in excess of the bare-bones cost of capital appears warranted.

There may be other factors that justify an allowance above cost of capital in arriving at a determination of fair rate of return, such as rewarding superior management by sharing the savings from such management between the ratepayer and the company, or to compensate for other adverse results flowing from regulatory lag.

"... a continuation of the excise tax on telephone and telegraph service will not, after all, jeopardize a continued profit in the business of the public utilities affected, because each one of them operates under rates set by public utility regulatory bodies which allow rates sufficiently high to enable the companies to meet their tax situations and at the same time operate at a profit, even if their business should be slightly reduced."

—SPESSARD L. HOLLAND,
U. S. Senator from Florida.



Washington and the Utilities

Congressional Actions to Date

THE somewhat unexpected decision of the congressional leaders to recess rather than adjourn the second session of the 86th Congress over the political conventions in July, leaves a good many chores for Congress to finish up in August. Indeed, aside from routine appropriations, the second session of the 86th Congress so far has not done very much of anything. But with the political campaigns moving on the horizon, it is believed that Congress must act on four major bills: federal aid to school construction, housing, amendments to the Wage-Hour Law, and medical aid to the aged.

Probably the most important final action taken to date was the tax bill on which the Senate reversed its own Finance Committee and agreed with President Eisenhower that over $700 million in excise taxes on telephone and telegraph service, plane and train passenger fares, etc., must be extended for another year. There are some minor bills of interest to the utility industries, however, which cleared the hopper in the closing days before the fourth of July recess. One of these was the legalization of TV booster stations (S 1886). This bill will (assuming that the President signs it) authorize the Federal Communications Commission to license some 1,000 stations which bring television to the remote mountain areas via booster devices which the FCC so far has not been able to regulate.

ANOTHER bill cleared for presidential approval authorized agreements with the Mexican government for the construction of the Amistad dam on the Rio Grand river (HR 12263). There is some dispute about whether there is any power potential in this project. Still another bill was sent to the White House opening 2,639,000 acres of federal land in Texas to oil and gas exploration and leasing (HR 8740). Both houses also finished action on a very interesting bill to set up a National Capital Transportation Act (HR 11135). This bill, when approved, would establish a transit authority with the duty of investigating the improvement of transit facilities in the metropolitan area of Washington, D. C.

Among other things the authority will

study will be a proposed subway between the Union Station and downtown Washington.

Another provision authorizes the District government to seek a compact with Virginia and Maryland for the regulation of mass transportation service in the nation's capital area. The bill does not presently contain any authority to operate transportation facilities. But it looks in that direction. When the authority decides what ought to be done about transportation, it is supposed to come back and ask Congress for more authority and money to do it.

As expected, the regulatory reform bill setting up a code of ethics for practice before the big six federal regulatory commissions was not able to move any further than a favorable report from the House Interstate and Foreign Commerce Committee, headed by Representative Harris (Democrat, Arkansas). And even though Congress returns to Washington in August in an effort to clear the deck of some of the more pressing bills, the belief is that Congressman Harris' controversial regulatory reform bill is too important to get through to the White House before the 86th Congress calls it a day and goes back to the political campaigns.

CONGRESS did manage to pass a coal research bill in such a way as to meet objections of the Eisenhower administration. The bill would set up an agency within the Interior Department to assist the coal-mining industry with immediate and short-range development problems. The Senate version is slightly different from the House-passed bill but no difficulty is expected in Congress. The bill would authorize a $2 million study for the first year and more funds as needed later.

Eisenhower vetoed a similar measure last year which would have set up an independent agency instead of putting the project under the Interior Department.

OTHER bills which seem likely to receive congressional action include the suspension of the equal time provisions of the Federal Communications Act, increasing the minimum wage, legalization of wire tapping in certain cases, prohibition of rigged TV and radio shows, and expansion of the saline water program.

The minimum wage amendment to the Fair Labor Standards Act will probably be watered down in the House (especially as to new coverage) as a concession to the House Rules Committee, which otherwise refused to "unfreeze" the bill. The Senate is expected to go for the original $1.25, plus extended coverage version, sponsored by Senator Kennedy (Democrat, Massachusetts).

Politics and the Regulatory Commission

FCC Chairman Ford pulled a switch recently when he suggested that Senator Proxmire (Democrat, Wisconsin) had tried to influence the FCC in a television license dispute. Ford made the suggestion in a taped radio-TV interview in Washington, D. C., when asked about the speech Senator Proxmire made on the Senate floor June 20th. Senator Proxmire, using the term "political payola," said then the FCC is now giving an advantage in TV license contests to companies with congressional members among their stockholders. Chairman Ford stated:

> There was a speech on the floor of the Senate which, in effect, I suppose was intended at least to influence the

commission by something which is not part of the record in this proceeding.

Do the federal regulatory commissions slow down the business they are supposed to be helping? Senator Symington (Democrat, Missouri), one of the chief contenders for the Democratic presidential nominations, thinks they do. The Senator made this charge while speaking before a Sales Executive Club meeting last month in New York city. He called upon the President and Congress to clear up the problem and suggested that a clearer definition of "public interest" might be the first step. Such a definition, he stated, would provide guideposts but not "strait jackets" for the operation of the commissions.

In the Senator's view, the much publicized gift giving, conflict of interests, and undue influence are not so important as the delays which occur. As an example, he stated that the Civil Aeronautics Board had stranded "many cities" without air transportation while it takes "three years to complete action on a case which could have been decided in one."

NRECA Paddled in Congress

JUNE 27th saw two hours taken up on the floor of the House of Representatives with speeches quite critical of the National Rural Electric Co-operative Association. The first of these was a speech by Representative Ancher Nelsen (Republican, Minnesota), who served as REA Administrator during the first term of the Eisenhower administration. Nelsen attacked NRECA's so-called "voting record."

The voting record referred to is a check list prepared each year under the direction of NRECA General Manager Clyde T. Ellis, which purports to show the members of Congress who have supported legislation favorable to REA. In a 15-page speech delivered on the House floor, Representative Nelsen stated that "it is high time that the Ellis voting records be given a complete airing by this Congress in order that the REA not be made a partisan political issue." Nelsen's speech concluded:

> . . . I am now calling these errors and inconsistencies to Mr. Ellis' attention, and in the spirit of fair play I believe the voting records need to be carefully reviewed.
>
> In fact, Mr. Speaker, because I am one of the farmers paying dues to NRECA, and because I am a member of Congress who has been intimately connected with the entire REA movement, I am offering to meet with the NRECA board of directors at any time to discuss these glaring misuses of the voting records.

NELSEN'S attack on Ellis was followed by an equally critical one-hour speech by Representative Hemphill (Democrat, South Carolina). Hemphill spoke in favor of the Upstream Benefit Bill (HR 7201), introduced by Representative Metcalf (Democrat, Montana). This bill was voted out of the House Interstate and Foreign Commerce Committee and was scheduled for hearing. The bill is designed to insure the most beneficial and efficient use of waters of the United States for the production of power and the maximum utilization of storage facilities to produce power. The bill has been strenuously opposed by the NRECA, which claims it discriminates against publicly owned power projects.

Hemphill accused NRECA of sending fake telegrams to influence Congressmen. He also referred to what he called the

"dog-in-the-manger" attitude of the public power bloc concerning the Upstream Benefit Bill. Representative Hemphill stated:

> Because of the misrepresentations which have been erroneously reported by those who apparently hate for private power to get any benefit so much that they are willing to sacrifice the benefit that public power is receiving in the process. We used to call it "dog in the manger," and I know the Congress knows who I am talking about. I made a request of Mr. J. D. Stevens, a consulting engineer from Seattle, Washington, who is recognized by both public and private power, to give me some examples for the Congress. These examples were made on Senate Bill 1782, which has the identical structure as HR 7201. I enclose the following examples. . . .

IN support of the bill, Representative Hemphill concluded:

> The real purpose, intent, and character of this bill is best indicated by the fact that it is supported by every operating utility both public and private, federal and nonfederal that has had experience with this problem. Despite the attempts of the minority to make this into a public *versus* private power fight, the fact is quite apparent that it is only a fight engendered by people with no experience in the operation of hydroelectric systems who have vague and uncertain fears that somehow any change in the status quo will hurt them. That this fear is groundless is conclusively proved by witnesses appearing before the committee.

REA Co-op Investment

THE Rural Electrification Administration on July 1st announced that the Treasury will make available to borrowers special bonds bearing 2 per cent interest. A spokesman said the agency will encourage REA borrowers to invest their excess cash in the special bonds.

The borrowers get their money from the Treasury at a rate of 2 per cent. After they draw the money from the Treasury for their rural power and telephone systems, there is usually some spare cash over and above operating expenses. This is the money REA wants the borrowers to invest in special bonds, bearing the same interest rate as that which the Treasury charges to the REA co-operatives.

The spokesman said there had been some instances where the borrowers had received 2 per cent money from the Treasury and invested any surplus at higher rates. The spokesman said if the borrowers buy the special Treasury bonds they would avoid criticism that they are profiteering at the government's expense.

Depreciation Study Started

THE Treasury on July 5th announced that it is starting a survey to find out what changes businessmen would like to see made in the tax laws governing depreciation. Officials said questionnaires would be mailed to some 2,700 corporations, asking for information and suggestions on depreciation. The Small Business Administration, which is co-operating in the study, was planning to send out an additional 8,500 similar questionnaires to smaller firms.

Officials said both the Treasury and Congress can use the survey results in planning future depreciation tax policy, perhaps involving legislative reforms.

Telephone and Telegraph

Communications Set for Political Convention

ONE of the most complete communications centers ever created to cover a political event has been assembled at Los Angeles, California, for the 1960 Democratic convention. When the Democrats make their selection for their presidential candidate they will have at their disposal a press center which fills the famed Biltmore Bowl room at the Biltmore Hotel. In addition, the press facilities fill the equally large Rex Room.

Pacific Telephone & Telegraph Company has installed more than 1,000 private telephones at the press center and Western Union has put in some 100 teletype machines which are capable of transmitting up to 300,000 words of copy per hour. At the Sports Arena, where the convention takes place, Pacific Telephone has spent more than $1 million on installations. Some 4,000 telephones have been put in and 20 extra telephone channels have been added to take care of the transmission by wire of photos. It is estimated that some 2,000 photos will be transmitted in this manner. In addition to all of the telephone and telegraph installations, there are also 123 double circuits for TV use and numerous TV receiving and sending "dishes."

National political leaders have called upon the candidates to make the campaign a "great debate" and, if preconvention arrangements are any indication, the communications industry is certainly doing everything possible to make such a debate a reality.

AT&T Explains Monitoring

As a result of newspaper inquiries American Telephone and Telegraph Company has explained the nature of its monitoring activities of certain transoceanic telephone conversations.

AT&T officials have confirmed that they monitor calls when the person on the line requests it or when the transmission is expected to be bad. Monitoring of this type is done on overseas calls over radiotelephone circuits and falls within the law which provides for such listening when it is in the interest of proper transmission, according to a company spokesman. In such cases no record of the conversation is kept and the company enforces strict rules to guard the conversations themselves.

No monitoring is done on calls made via the cables to France, England, and Hawaii but radiotelephone calls are monitored to assure the best transmission. Company officials have stated that few

people realize how high the quality of an overseas call should be and that monitoring technicians can correct fading signals which, if they were not corrected, might give the customer the impression that overseas service was of poor quality. In addition to correcting fading signals the monitoring technician can credit the customer's bill for any portion of the conversation which is not received.

Among those groups which have protested such signal monitoring is the American Civil Liberties Union. The Washington director of this group has termed the practice "outrageous," stating that it is an invasion of privacy and noting that the ACLU is opposed to wiretapping "by anybody."

THE Federal Communications Act does not specifically ban monitoring of calls; however, it is explicit that conversations thus "tapped" may not be repeated or used in any manner. Thus, by law, such technicians who monitor the signal of radiotelephone conversations are forbidden to divulge or publish the existence, contents, substance, purport, effect, or meaning of the conversations they hear.

Employees of AT&T are required to be familiar with this section of the law.

President Makes FCC Appointment

CHARLES H. KING of Detroit, Michigan, has been nominated by President Eisenhower to the Federal Communications Commission. Mr. King has been dean of the Detroit University College of Law and he will fill the unexpired term of John C. Doerfer who resigned after the disclosure of his acceptance of yacht trips in Florida from a broadcasting executive.

Prior to Mr. King's nomination the President had appointed Edward Mills, Jr., of Morristown, New Jersey, but the post remained vacant when Mills asked that his name be withdrawn.

Mr. King has been a law school dean for sixteeen years and also served as the Michigan manager for the late Senator Taft during the latter's Republican presidential bid in 1952.

Coast-to-coast Solar Radio Hookup

JOINT effort on the part of the U. S. Army Signal Corps and the electronics industry has produced what is believed to be the first coast-to-coast radio conversation powered by the sun. The experiment, which took place last month at Fort Monmouth, New Jersey, utilized a 20-square-foot panel of silicon solar cells. Each panel contained more than 7,800 individual cells and produced electric energy, which was stored in conventional storage batteries. Sunlight on the silicon cells released electrons which set up the electric flow. This system is similar to the one which has been used to provide power for broadcast units in some of our satellites.

The Signal Corps believes that such a system might be of great value for civilian defense radio stations, which might be subject to conventional power failure, and for military radio installations far removed from commercial sources of electricity. Colonel Leon J. D. Rouge, who conceived the experiment, also believes that such a solar-powered system might make radio and telephone communications practical in areas, such as Africa, which have abundant sunlight and little, if any, economical means of obtaining power through normal transmission lines.

Western Union Begins '60-61 Training Course

WESTERN UNION TELEGRAPH COMPANY is continuing for the eleventh year its orientation course for new employees. Just recently, at the beginning of the 1960-61 course, Walter P. Marshall, president of Western Union, told one hundred and fourteen new employees of the company that unprecedented opportunities for success were at hand, because of the company's rapid technical progress in communications. He stated that a major growth area in the communications industry is indicated by ever-increasing requirement on the part of government and industry for custom-tailored private wire systems involving digital data transmission techniques.

The new employees are attending the company's 1960-61 management training course at Western Union's New York headquarters. The two-week session will acquaint the men with the operation of the company and give them an opportunity to meet company executives and gain a general picture of Western Union's operation and organization.

A company spokesman has stated that Western Union is convinced that employees establish their careers better, if they know each department's responsibilities, and who does what and why. The course, also, includes illustrated talks, equipment demonstrations, and visits to company laboratories and offices.

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FCC Receives Pay TV Application

ZENITH RADIO CORPORATION has filed an application with the FCC for operation of a pay TV experiment in the Hartford, Connecticut, area. Commission approval for this project is needed owing to the fact that programs will be broadcast rather than piped into residences through a closed circuit system. Numerous groups, especially theater owners, opposed the licensing of such an experiment on the grounds that it would cut down on theater and movie attendance. One national group, Theater Owners of America, has even urged the enactment of legislation which would prohibit all pay TV, including the closed circuit type.

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IF the Zenith Corporation receives FCC approval, it is its intention to install some 2,000 units in the Hartford area. Director of Zenith's toll operation, Pieter Van Beek, has indicated that program content will be flexible. "We're not going into this test with frozen, preconceived notions as to what the public likes best," he has stated. It is anticipated that individual programs will cost the viewers from 75 cents to $1.50. However, some charges for special events programs may run as high as $3.50. Installation costs on the "decoding" system will be somewhere between $7.50 and $10. A 75-cent weekly rental may be charged for the use of this device. Zenith officials believe that a system will become profitable when between 45,000 and 60,000 have subscribed. Up to this time, the FCC has not authorized any regular pay TV service which requires the use of a "decoding" device on regular TV sets.

Pay TV is now in operation, on a test basis, in Toronto, Canada, and the International Telemeter Company, a division of Paramount Pictures, is studying the possibility of experimental operations in New York and Los Angeles. The Canadian operation is via cable transmission, of a type which would not, in the United States, be subject to FCC control.

Financial News and Comment

By OWEN ELY

Utility Financing—Policies Suggested at EEI Convention

A PANEL of five financial experts at the recent Edison Electric Institute convention discussed present and future fund raising by the electric utilities, and brought in some interesting conclusions regarding financial policies. During the decade 1960-70, it was forecast, about 129 million kilowatts of new generating capability will be added by the investor-owned electric utilities. These facilities, along with new transmission and miscellaneous facilities, are expected to cost some $52 billion. Of this amount about $4 billion will be obtained through retained earnings and $17 billion from depreciation accruals, leaving a total of $31 billion to be raised by sale of securities. With retained earnings helping to sustain the present equity ratio averaging about 37 per cent, the new securities would be divided about as follows, it is estimated: $19 billion bonds, $4 billion preferred stock, and $8 billion common stock.

HAROLD YOUNG of Eastman Dillon, Union Securities & Co. stated that electric utilities had already done so much financing that some buyers "have as much of their paper as they really want." Some of the big utilities are already paying more for their capital than their credit warrants, he indicated, since buyers will take additional offerings only at price concessions. Hence, he suggested, the larger utilities might do better by coming to the market "more often for smaller bites." He also suggested that more convertible securities should now be issued, since these would tap new areas of buying interest. Some buyers may be unable or unwilling to buy common stock, yet will buy bonds with a convertible feature because of the appreciation potential.

Regarding bond financing, Vice President Conklin of the Guardian Life Insurance Co. of America pointed out that during 1937-50 utility bonds comprised the largest bondholdings of insurance companies, but that the situation has changed radically and insurance companies now have little interest in buying utility bonds. We find this statement seems borne out

DEPARTMENT INDEX

by the weekly tables published in *The Wall Street Journal* showing the investments of 33 major life insurance companies. In the latest table, published June 21st, these companies reported that during the first twenty-four weeks of 1960 35 per cent of their investment funds had gone into mortgage loans, 24 per cent into government and municipal bonds, 35 per cent into industrial and miscellaneous bonds, and only 3 per cent into utility bonds; of the remainder, about 1 per cent went into utility stocks, 1 per cent into industrial equities, and 1 per cent into miscellaneous investments.

THE reasons are as follows, Mr. Conklin explained: The insurance companies were disillusioned in 1953 and 1954 when, after having obtained better yields than in the previous two decades, they lost many of these investments when interest rates suddenly declined sharply and a number of refundings took place. Since protection against call is largely unobtainable in utility bonds the insurance companies now prefer other securities where they can obtain such protection. A survey of 57 companies in 1958 indicated that for all but three of these companies, protection against early redemption of bond issues was of major importance in their investment policy. (Unfortunately for the utilities, we might mention the SEC and FPC seem opposed to noncallable provisions in bond issues.)

Life insurance companies are now more interested in real estate mortgages, industrial bonds, and private placements, and the savings banks have also been attracted to mortgages. If the utility companies wish to hold some part of this institutional market they should try to make concessions to suit the special desires of large buyers, with respect to protection against refunding for a certain period of years, stronger sinking funds, and perhaps a shorter maturity than the usual thirty years, Mr. Young suggested.

FORTUNATELY for the utility companies, the big pension funds, which have been growing rapidly and now have an estimated $6.1 billion assets, have largely replaced the life insurance companies as utility bond buyers. The reason, as explained by Mr. Conklin, is primarily because state and local pension funds are so hedged in with legal investment restrictions that they have little or no option but to buy utility bonds, which usually have a favorable record with respect to the "number of times fixed charges have been earned" over a period of years, and can also easily meet the other requirements set up in the state laws or commission regulations.

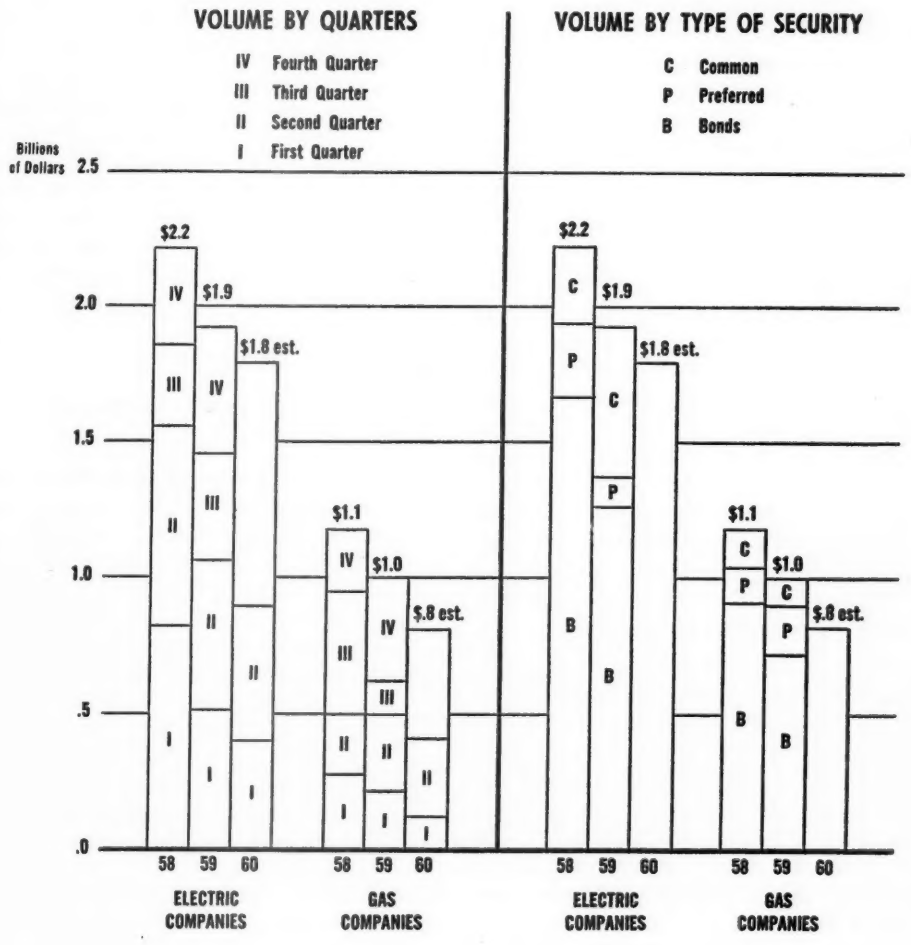
But the utilities should not be too sure that this market will remain, over the long run. Pension funds may obtain less restrictive provisions in future, giving them wider variety of investment choice. At that time, they might also rebel against present call provisions.

UTILITIES have been fortunate recently with respect to the market for preferred stock issues. Life insurance companies are now taxed more heavily than formerly, and hence are interested in buying new utility preferred stocks, because of the 85 per cent tax exemption provision for corporate holders. Practically all new issues have this feature since they involve funds for construction, and are not issued for refunding purposes. Consolidated Edison of New York in March arranged to place privately $60 million 5¾ per cent preferred stock, of which $36.5 million was sold March 3rd with the remainder to be sold August 3rd and February 3, 1961. Of the total amount it

is understood that the life insurance companies agreed to take $46.5 million.

Regarding common stock financing, there is less need for this now, Harold Young stated, since equity ratios have been raised to around 37 per cent by most companies. At present the best buyers of common stocks appear to be

Summary of Financing
by
Large Electric & Gas Companies



Source—Irving Trust Company—Amounts include new money financings by companies with assets over $35,000,000.

pension funds, mutual funds, and private investors; life insurance companies and savings banks "seem only to be nibbling." To sustain and improve the interest in common stock, he urged that the utilities should keep their earnings and dividends in an upward trend.

FREDERICK W. PAGE, vice president of Tri-Continental Corporation, also discussed the importance of earnings growth as a factor in market price. A company's reputation as a "growth utility" is neither easily earned nor quickly lost in the stock market, he pointed out.

As the result of the 1929 debacle, the long depression of the 1930's, and the wartime period, utility stocks lost their reputation for rapid growth in earnings which had been exploited by holding company promoters in the hectic 1920's. After World War II the growth idea was slowly revived, and actual earnings gains year after year gradually convinced the public. The investor now usually determines the rate at which earnings grew in the past five or ten years, and tries to determine whether or not there will be any change in this trend. Factors affecting such growth are regulation and rate of return, the amount of reinvested earnings, capital structure, cost of prior capital, and the price obtained from sale of common stock in relation to its book value.

THE importance of the latter ratio is not always appreciated. Assuming that rate of return, capital structure, and cost of prior capital remain constant and that there are no reinvested earnings, a utility selling common stock at book value would obtain no increase in per share earnings from its expansion program.

However, if the common stock is sold at a substantial premium over book value, a sharp gain in earnings will result. Thus a utility with a rate of 6 per cent return, capitalized with 70 per cent senior securities and 30 per cent common equity, and paying 5 per cent for its senior money, will obtain a 30 per cent gain in per share earnings under a 50 per cent expansion program if the new common is sold at a premium of 150 per cent over book value. The higher the premium the greater will be the effect on earnings. Since premiums are produced mainly by high price-earnings ratios, a utility executive should continuously strive for a maximum ratio for his stock, by maintaining a consistent rate of growth in per share earnings. With rapid growth in earnings investors are assured of capital gains and will be less interested in dividend pay-out and yield—in fact a low pay-out is considered favorable because retained earnings are put to work "undiminished by the tax bite," as Mr. Page expressed it.

REGARDING *regular* stock dividends, Mr. Young stated:

> An idea has been propounded that the payment of a stock dividend annually in addition to a cash dividend may be the best way to minimize or avoid common stock financing. Some investors in the high tax brackets welcome stock dividends. On the other hand, some buyers—especially among the trust companies—want no part of them. I think it is early to pass judgment finally on this idea but stocks of the companies pioneering the plan have not responded marketwise in a way that suggests a spontaneous reception of the idea.

There was some difference of opinion regarding the use of subscription rights. Mr. Young felt that "in some future

market where buyers are not as easy to find, the companies which have consistently made offerings to their shareholders may find some competitive advantage." On the other hand, Mr. Page held that both stock dividends and rights offerings tend to conceal or dilute the gains in share earnings record, and so adversely affect the price-earnings ratio and lower the premium obtainable on the sale of common stock. Hence he did not recommend using either stock dividends or rights except under special circumstances.

CALENDAR OF PROPOSED UTILITY OFFERINGS

July 15th-December 3rd

Date of Bidding Or Sale	*Approx. Amount (Millions)*		*Method Of Offering*	*Moody Rating**
		Bonds and Debentures		
—	$ 50	Tennessee Valley Authority	C	—
7/19	5	New Jersey Power & Light	C	A
7/26	22	Southern Counties Gas	C	A
8/ 2	100	Southwestern Bell Telephone	C	Aaa
8/16	35	Michigan Bell Telephone	C	Aaa
8/23	60	Southern California Edison	C	Aa
9/	35	Consumers Power	C	Aaa
9/	12	Rochester Telephone	C	Aa
9/13	25	Virginia Electric & Power	C	Aa
9/14	17	Utah Power & Light	C	A
9/20	50	Public Service Electric & Gas	C	Aa
9/27	12	Indianapolis Power & Light	C	Aa
10/	30	Wisconsin Electric Power	C	Aa
10/	65	Alberta Gas Trunkline	—	—
10/ 6	30	Columbia Gas System	C	A
10/18	16	Louisville Gas & Electric	C	Aa
10/19	50	Union Electric	C	Aa
10/20	25	Florida Power Corp.	C	Aa
11/ 3	12	Georgia Power	C	A
—	15	Idaho Power	—	Aa
12/ 6	35	Northern States Power	C	Aa
—	30	Long Island Lighting	C	A
—	30	Detroit Edison	—	Aa
—	3	Lake Superior District Power	—	A
—	10	Iowa Electric Light & Power	N	—
—	30	Northern Natural Gas	N	A
—	6	Otter Tail Power	—	Baa
—	65	Panhandle Eastern Pipe Line	—	A
—	35	Trunkline Gas	—	—
—	30	Pacific Lighting System	—	—
—	30	Wisconsin Electric Power	—	Aa
—	25	Texas Eastern Transmission	—	—
		Convertible Debentures—Subscription Offering		
7/26	38	Consumers Power	C	Aa
		Preferred Stocks		
9/14	10	Utah Power & Light	C	—
—	5	Hawaiian Electric	—	—
—	20	Baltimore Gas & Electric	—	—
—	20	Pacific Lighting System	N	—
—	20	Houston Lighting & Power	C	—
—	15	Texas Eastern Transmission	—	—
		Common Stocks—Offered to Stockholders		
—	5	Hawaiian Electric	—	—
		Common Stocks—Offered to Public		
—	8	Columbus & Southern Ohio Electric	—	—

*Preliminary, or rating of similar issues. C—Competitive, N—Negotiated.

New York Paper Calls State Commission "Pasture for Politicians"

THE *New York World-Telegram* recently carried a series of five feature articles about regulation in New York state, written by a staff man, Walter MacDonald. The articles were well developed from a factual and historical standpoint, but the headings and some of the conclusions were politically slanted against the state commission and the utility companies, with a strong inference that the commission was being too lenient and easygoing with the utilities.

The articles were headed "Politicos Use PSC as Payoff Plums"; "Amid Politicos, PSC Often Has 'Strong Man' Aiding Public"; "Past Performance Shows Higher Utility Rates Likely"; "PSC Fought Losing Battle to Halt Telephone Rate Hike"; and "Commuters Lose on Fare Hikes but Keep Most of the Runs."

While the writer had done a reasonably good research job in preparing the articles, he evidently concluded that the large utility companies operating in the state had gotten the best of the bargain in their struggles for higher rates or fares, and that the consumer was on the losing end, with the commission a poor referee. In this connection he apparently made little or no effort to learn the real merits of the several cases described or to study such important factors as rate of return, the flow through of tax savings ordered by the commission to aid consumers, or other issues of a technical nature.

HE was perhaps warranted in his accusation that some men had been appointed to the commission without special experience for the job, and that they had to lean heavily on one experienced or "dominant" commissioner, as well as on the staff. He accused three governors—Messrs. Dewey, Harriman, and Rockefeller—of making appointments purely on a political basis, and described the appointments in some detail. He concluded that the public is generally dissatisfied with the commission because it feels that "fare and utility rate boosts are handed out too easily by the PSC." The story concludes "over the years the PSC has won a few battles, but rates go up and in the long run PSC seems to be losing its fight to protect the consumer and the commuter. Many persons believe this could be changed if the PSC had stronger commissioners and greater power instead of being used to a large extent as a pasture for ex-politicians." This view seems contrary to that generally held by many security analysts, who consider the commission rather "tough" in many of its dealings with the utilities, though it has improved in recent years.

Mr. MacDonald describes Milo R. Maltbie as "one of the most distinguished public service commissioners ever to serve in this state"—a sentiment which would hardly be seconded by some utility companies—and credited him with "scaling down utility tariffs during depression years."

He refers to one of the present commissioners, Francis T. Mylott, who has been connected with the commission over the past thirty years and who will come up for reappointment next year, as "the only PSC member with unquestioned experience." He also pays tribute to the "hard core" of career experts, staff members, and consultants associated with the commission, as experts in their particular fields.

THE articles discuss the history of state regulation of Consolidated Edi-

son and Bell Telephone, including Con Ed's present rate proceeding. Bell Telephone's battle in the legislature, the commission, and the courts to maintain its "fair value" rate base is described—telephone companies are fortunate in having the support of New York law on this point, though electric and gas companies are denied it.

THE articles may be of moderate historical interest, but will not help the public to understand the regulatory problems and issues involved. Perhaps it is too much to hope that a newspaper which evidently tries to build circulation by "helping the poor taxpayer" could give a complete and fair analysis of these cases. The harmful feature is the innuendo in the headlines that the public in New York state is being given a bad deal in state regulation.

AFTER adjusting for inflation of the dollar as reflected in the cost-of-living index, residential users of electricity in New York city last year paid 44 per cent less per kilowatt-hour than they did in 1946, according to estimate. Yet, Consolidated Edison's cost of bond financing (interest rate on new issues) nearly doubled. Its earned return on invested capital last year was only 4.7 per cent while it had to pay 5.2 per cent for new bond money. This does not look as if the public was being wronged.

FINANCIAL DATA ON GAS UTILITY STOCKS

Annual Rev. (Mill.)			*6/28/60 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earns.*	*Per Cent Increase In Share Earn. Recent*	*5-yr. Aver.*	*Price-Earn. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Pipeline and Integrated Systems									
$ 6	O	Ala. Tenn. Nat. Gas	25	$1.20(k)	4.8%	$1.58Ma	12%	8%	15.8	76%	43
227	S	American Nat. Gas	65	2.60(L)	4.0	4.57Ma	14	7	14.2	57	40
111	A	Arkansas Louisiana Gas .	36	1.00	2.8	1.68De	38	50	21.4	60	40
62	O	Colo. Interstate Gas	34	1.25(r)	3.7	1.73Ma	NC	11	19.7	72	26
465	S	Columbia Gas System ...	19	1.00	5.3	1.46Ma	6	6	13.0	69	45
21	O	Commonwealth N. G. ...	21	1.00	4.8	1.64De	1	6	12.8	61	52
12	S	Consol. Gas Util.	27	.90(b)	3.3	1.59Ap	10	15	16.9	57	59
324	S	Consol. Nat. Gas	45	2.20	4.9	3.02Ma	D12	3	14.9	73	58
452	S	El Paso Nat. Gas	33	1.30	3.9	1.66De	3	11	20.0	78	17
55	S	Equitable Gas	35	1.85	5.3	2.41Ma	D6	11	14.5	77	46
36	O	Houston N. G.	38	.80	2.1	2.22Ap	57	9	17.1	36	20
24	O	Kansas Nebr. Nat. Gas ..	24	1.04	4.3	1.85Ma	22	6	13.0	56	36
125	S	Lone Star Gas	38	1.80	4.7	2.47Ma	4	6	15.4	73	43
88	S	Miss. River Fuel	32	1.60	5.0	2.19De	12	5	14.6	73	50
31	S	Montana Dakota Util. ...	29	1.20	4.1	1.92Ma	9	5	15.1	63	30
29	O	Mountain Fuel Supply ..	26	1.20	4.6	1.77De	13	4	14.7	68	53
94	S	Natl. Fuel Gas	23	1.15	5.0	1.67Ma	D8	6	13.8	69	52
159	S	Northern Nat. Gas	28	1.40	5.0	2.03Ma	26	7	13.8	69	32
43	S	Oklahoma Nat. Gas	28	1.24	4.4	2.20Ap	15	5	12.7	56	34
137	S	Panhandle East. P. L. ..	42	1.80	4.3	3.30De	18	9	12.7	55	38
16	O	Pennsylvania Gas	25	1.20	4.8	2.61De	23	4	9.6	46	59
226	S	Peoples G. L. & Coke ...	64	2.30	3.6	4.17Ma	13	8	15.3	55	43
33	O	Pioneer Natural Gas	23	.88	3.8	1.40De	27	9	16.4	63	41
122	S	Southern Nat. Gas	34	2.00	5.9	1.82Ma	D9	—	18.7	110	36
46	O	Southern Union Gas	23	1.12	4.9	1.50De	7	3	15.3	75	29
463	S	Tenn. Gas Trans.	23	1.10	4.8	1.29Ap	19	17	17.8	85	26
296	O	Texas East. Trans.	29	1.40	4.8	2.28Ma	11	4	12.7	61	21
116	S	Texas Gas Trans.	34	1.40	4.1	2.53Ma	23	9	13.4	55	24
147	O	Transcont. Gas P. L. ...	20	1.20(b)	6.0	1.25Ma	3	6	16.0	96	20
354	S	United Gas Corp.	30	1.50	5.0	2.20Ma	D8	2	13.6	68	41
		Averages			4.5%		12%	8%	15.2	67%	

Annual Rev. (Mill.)		(Continued)	6/28/60 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent	5-yr. Aver.	Price-Earn. Ratio	Div. Pay-out	Approx. Common Stock Equity
		Retail Distributors									
34	S	Alabama Gas	29	$1.60	5.5%	$2.44Ma	15%	1%	11.9	57%	35
57	O	Atlanta Gas Light	39	1.80	4.6	3.69Ap	46	6	10.6	49	39
3	O	Berkshire Gas	18	1.00	5.6	1.22F	D14	6	14.8	82	41
7	A	Bridgeport Gas	30	1.68	5.6	1.89Ma	D29	5	15.9	89	48
6	O	Brockton-Taunton Gas	19	1.00	5.3	1.30De†	10	18	14.6	77	46
89	S	Brooklyn Union Gas	27	1.20	4.4	1.76Ma	D2	6	15.3	68	42
45	O	Central Elec. & Gas	26	1.20	4.6	1.89Ma	16	9	13.8	63	18
14	O	Cent. Indiana Gas	15	.80	5.3	.88Ma	5	—	17.0	91	58
6	O	Chattanooga Gas	4	—	—	.30F	D21	—	13.3	—	44
16	O	Elizabethtown Gas	35	1.60	4.6	3.36Ap	21	11	10.4	48	79
77	O	Gas Service	34	1.72	5.1	2.16Ma	D23	8	15.7	80	35
9	O	Hartford Gas	45	2.00	4.4	2.90Ma	8	—	15.5	69	51
3	O	Haverhill Gas	27	1.60	5.9	1.97My	D11	12	13.7	81	53
21	O	Indiana Gas & Water	23	1.00(b)	4.3	1.63My	8	5	14.1	61	46
58	S	Laclede Gas	23	1.05	4.6	1.45Ma	18	8	15.9	72	38
7	O	Mich. Gas Utils.	15	.60	4.0	.90Ma	22	5	16.7	67	37
53	O	Minneapolis Gas	32	1.55	4.8	2.09Ma	2	—	15.3	74	43
18	O	Miss. Valley Gas	23	1.20	5.2	1.93Ma	D14	—	11.9	62	37
6	O	Mobile Gas Service	26	1.10	4.2	1.45Ma	10	4	17.9	76	38
8	O	New Haven Gas	38	2.00	5.3	3.24De	5	5	11.7	62	68
16	O	New Jersey Nat. Gas	23	.90	3.9	1.38Ma	NC	12	16.7	65	36
105	O	Northern Illinois Gas	35	1.20	3.4	2.13My	24	14	16.4	56	50
10	O	North Penn Gas	12	.65	5.4	1.15Ma	31	10	10.4	57	60
20	O	Northwest Nat. Gas	21	.84	4.0	*1.50Ma	*34	*11	*14.0	56	36
307	S	Pacific Lighting	49	2.40	4.9	3.03Ma	2	2	16.2	79	41
12	O	Piedmont Nat. Gas	14	.50	3.6	.88Ma	10	—	15.9	57	27
2	O	Portland Gas Lt.	17	.75(m)	4.4	1.93De	D12	13	8.8	39	27
11	A	Providence Gas	11	.56	5.1	.65De	8	5	16.9	86	48
4	A	Rio Grande Valley Gas	4	.16	4.0	.32De	D6	7	12.5	50	46
5	O	So. Atlantic Gas	14	.80	5.7	.87De	D28	—	16.1	92	30
16	S	So. Jersey Gas	25	1.00	4.0	1.35Ma	8	13	18.5	74	51
36	S	United Gas Improvement	49	2.40	4.9	3.39Ma	1	10	14.4	71	49
63	S	Wash. Gas Light	50	2.40	4.8	3.90Ma	D8	3	12.8	57	39
18	O	Wash. Nat. Gas	25	(g)	—	1.39De	111	20	18.0	—	38
11	O	Western Ky. Gas	18	.70	3.9	1.62Ma	59	15	11.1	43	36
		Averages			4.7%		9%	6%	14.4	65%	

FINANCIAL DATA ON TELEPHONE, WATER, AND TRANSIT STOCKS

Annual Rev. (Mill.)			6/28/60 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent	5-yr. Aver.	Price-Earn. Ratio	Div. Pay-out	Approx. Common Stock Equity
		Communications									
$6,771	S	American T. & T. (Cons.)	89	$3.30	3.7%	*$5.27F	*11%	*4%	*16.8	63%	64
377	A	Bell Tel. of Canada	45	2.20	4.9	2.39De	12	—	18.8	92	62
51	O	Cin. & Sub. Bell Tel.	90	4.50	5.0	5.57De	8	2	16.2	81	77
288	A	Mountain Sts. T. & T.	194	6.60	3.4	10.14F	19	7	19.1	65	59
380	A	New Eng. T. & T.	34	1.72	5.1	2.24Ma	9	7	15.2	77	59
1,040	S	Pacific T. & T.	28	1.14	4.1	1.51F	27	6	18.5	75	57
128	O	So. New Eng. Tel.	44	2.20	5.0	2.51De	D3	5	17.5	88	65
		Averages			4.5%		12%	4%	17.4	77%	
		Independents									
7	O	Anglo-Canadian Tel.	39	$1.20	3.1%	$3.37Ma	9	21%	11.6	36%	44
45	O	British Col. Tel.	45	2.20	4.9	3.08Ma	90	—	14.6	71	28
4	O	Calif. Inter. Tel.	13	.70	5.4	.53Ma	45	NC	24.5	132	24
25	O	Calif. Water & Tel.	29	1.36	4.7	1.79Ma	—	5	16.2	76	36

Annual Rev. (Mill.)		(Continued)	6/28/60 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent	5-yr. Aver.	Price-Earn. Ratio	Div. Pay-out	Approx. Common Stock Equity
22	O	Central Tel.	22	.88(b)	4.0	1.57De	13	—	14.0	56	33
5	O	Commonwealth Tel.	21	.90	4.3	1.47De	9	8	14.3	61	35
5	O	Florida Tel.	27	1.00	3.7	1.32De	32	4	20.5	76	40
1,081	S	General Tel. & Elec.	31	.76	2.5	1.14Ma	7	10	27.2	67	43
23	O	Hawaiian Telephone	22	1.00	4.5	*1.28My	—	*4	*17.2	78	45
8	O	Inter-Mountain Tel.	16	.80	5.0	.77De	D15	—	20.8	104	53
26	S	Rochester Tel.	24	1.00	4.2	1.54De	3	5	15.6	65	36
12	O	Southwestern St. Tel.	24	1.20	5.0	1.44De	D8	3	16.7	83	42
13	O	Tel. Service of Ohio	28	.35(q)	1.3	1.21Ma	35	8	23.1	29	32
42	O	United Utilities	40	1.45	3.6	1.95De	19	14	20.5	74	39
19	O	West Coast Tel.	25	1.20	4.8	1.89Ma	36	5	13.2	63	37
276	S	Western Union Tel.	46	1.40	3.0	2.59De	31	15	17.8	54	87
		Averages			4.0%		13%	7%	18.0	70%	
		Water Companies									
		Holding Companies									
48	S	American Water Works	22	$ .80	3.6%	$1.46De	44%	7%	15.1	55%	19
		Operating Companies									
5	O	Bridgeport Hydraulic	37	$1.70	4.6%	$1.86De	6%	5%	19.9	91%	51
17	O	Calif. Water Service	24	1.20(j)	5.0	1.63My	D3	6	14.7	74	37
5	O	Elizabethtown Water	25	1.20	4.8	2.20De	17	—	11.4	55	60
12	S	Hackensack Water	48	2.40	5.0	4.36De	32	6	11.0	55	35
10	O	Indianapolis Water	24	1.20(s)	5.0	1.66Ma	25	5	14.5	72	34
6	O	Jamaica Water	40	2.20	5.5	3.18Ma	D3	17	12.6	69	28
5	O	New Haven Water	66	3.40	5.2	2.91De	D12	—	22.7	117	55
2	O	Ohio Water Service	28	1.50(b)	5.4	1.75Ma	10	—	16.0	86	33
11	O	Phila. & Sub. Water	61	1.80(s)	3.6	3.29Ma	31	5	18.5	49	29
3	O	Plainfield Un. Water	19	1.10	5.8	2.31De	44	12	8.2	43	66
5	O	San Jose Water	36	1.30	3.6	2.27Ap	7	10	15.9	57	41
11	O	Scranton-Springbrook	24	1.20	5.0	1.78Ma	6	6	13.5	67	29
7	O	South. Calif. Water	19	1.00	5.3	1.36Ma	25	8	14.0	74	36
4	O	Southern Gas & Water	21	.80(d)	3.8	1.81Ma	30	5	11.6	44	19
		Averages			4.8%		15%	6%	14.6	68%	
		Transit Companies									
21	O	Baltimore Transit	7	—	—	$1.02De	72%	11%	6.9	—	45
12	O	Cincinnati Transit	7	$ .30	4.3%	.91De	193	—	7.7	33%	56
66	S	Fifth Ave. Lines	18	1.00(t)	5.6	.23De	—	—	—	—	65
322	S	Greyhound Corp.	21	1.00(p)	4.8	1.81De	D5	7	11.6	55	62
26	S	Nat. City Lines	26	2.00	7.7	2.22De	33	—	11.7	90	92
13	O	Niagara Frontier Trans.	13	.60	4.6	.10De†	D87	—	—	—	67
20	A	Pittsburgh Rys.	11	.25	2.3	—	—	—	—	—	90
6	O	Rochester Transit	7	.40	5.7	1.08De	26	—	6.5	37	100
21	O	St. Louis P. S.	9½	.80	8.4	.77De	13	—	12.3	104	93
13	S	Twin City R. T.	8	—	—	.59De	146	—	13.6	—	65
20	O	United Transit	6	.70	11.7	.89De	18	2	6.7	79	54
		Averages			6.1%		52%	2%	9.6	66%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. NC—Not comparable. NA—Not available. D—Decrease. *On average shares. **Includes tax savings from accelerated depreciation. (a)—Adjusted to eliminate 13 cents per share of nonrecurring tax savings. (b)—Also 20 per cent stock dividend January 15, 1960. (d)—Also 1 per cent stock dividend quarterly. (e)—Also 3 per cent stock dividend January 7, 1960. (g)—Five per cent stock dividend April 10, 1959. (j)—Also 5 per cent stock dividend March 19, 1959. (k)—Also 20 per cent stock dividend March 9, 1959. (L)—Also 10 per cent stock dividend June 10, 1959. (m)—Also 10 per cent stock dividend January 15, 1960. (n)—Excludes profit realized on sale of Los Angeles Transit $3.81 per share. (p)—Also 5 per cent stock dividend June 30, 1959. (q)—Also 3 per cent stock dividend December 31, 1959. (r)—Also 40 per cent stock dividend June 13, 1960. (s)—Also 10 per cent stock dividend March 31, 1960. (t)—Paid to date. †—December, 1958.

What Others Think

AFL-CIO Energy Survey

THE American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) Department of Research has recently issued an energy survey, entitled "Energy—Work Horse of America's Economy." The article appeared in the May-June issue of *Labor's Economic Review,* a monthly publication of the union.

The survey indicates that there are five vital questions concerning the nation's energy resources. They are: (1) How much and what kinds of energy has the nation been using? (2) What will be the type and demand for energy in the next twenty to twenty-five years? (3) Has the U. S. enough reserves to meet demands? (4) Will unit costs of energy increase? (5) What policies are needed to keep the U. S. supplied with abundant low-cost energy?

Energy consumption in 1958 increased nearly sixfold over the 7.6 trillion British thermal units used in 1900. During this period energy from oil and natural gas has shown a sevenfold and thirteenfold increase and water power increased some six times. There has been a shift from one energy fuel to another, the latest being to natural gas. Some time in the future, atomic energy (the publication forecasts the year 2000) will begin to move into the energy field. It is amazing to realize that a little over 100 years ago 90 per cent of the nation's energy requirements were supplied by wood. Between 1950 and 1957, the survey notes, the Russians led the industrial nations in the rate of electric power capacity increase. Following Russia were West Germany, Great Britain, and the United States. (It must be remembered that this Russian gain tends to fall into its correct perspective when it is realized that the U. S. is now meeting its power demands and Russia is still attempting to do so.)

THE survey indicates, along with a number of similar predictions, that energy demands of the past half-century will be dwarfed by the next twenty to forty years. The publication states:

> U. S. population is expected to increase more than 40 per cent by 1975. Assuming peace, a continued full employment economy with increasing living standards, and technological advances, experts foresee an even steeper increase in energy requirements. Their estimates disagree only in extent.

The Federal Power Commission has reported that in 1958 America's electric utilities generated 726 billion kilowatts. Two estimates, one by Resources for the Future and the other by Philip Sporn,

president of the American Electric Power Company, have predicted that by 1975 the United States will be generating some two trillion kilowatts of electric power.

There is a difference of opinion as to whether the United States has adequate energy reserves to meet the demands that will be placed on it by 1975. The survey quotes a number of persons regarding the continued availability of fuels at costs the economy can afford. Bruce C. Netschert of Resources for the Future believes that technology should be able to cope with any deterioration of resources quality that may arise. W. K. Davis and U. M. Staebler of the U. S. delegation to the second United Nations Conference on Peaceful Uses of Atomic Energy, believe that if present estimates are correct the usable fuel reserves within the United States will be exhausted in about 150 years.

IN looking at the prospective supply of fuel for any extended period, one must not forget the improvements in technology which produce improved methods of recovery and more efficient uses of the fuel itself. The AFL-CIO energy review states:

> Usable reserves of oil and natural gas in the United States can be enlarged by greater efficiency in discovery, recovery, and processing, bringing more new production into use and increasing economic use of reserves already being tapped.
>
> Natural gas reserves are in direct ratio to those of crude oil. For every barrel of crude oil discovered and proved, natural gas proved reserves will be increased by so many thousand cubic feet.
>
> The coal reserve problem is more one of quality than of quantity. Many major deposits of coal are deteriorating in grade and those of high grade cost more to recover the deeper they go.
>
> Improved strip mining techniques and equipment provide savings by more efficient excavation operations at greater depth.

Nuclear reactors depend on mined uranium as their power source. The United States is estimated to have about 220,000 tons of reserve ore and this figure may be increased by future exploration and discoveries. In 1958 uranium production reached 18,000 tons out of a total of 42,000 tons for the free world. The survey calls on the Atomic Energy Commission to take the initiative in establishing immediate goals for competitive nuclear power in low- as well as high-cost fuel areas. It is the AFL-CIO's belief that lower interest on borrowed money would exert an important influence in the energy field and reduce power costs. Possible new sources of fuel exist, the survey points out, in the use of oil shale, solar energy, and fusion.

IN conclusion the AFL-CIO calls for another national energy survey to update the findings of the 1950 President's Materials Policy Commission. Such a survey, the union believes, should provide the foundations for an integrated national energy policy consisting of the following: (1) abundant supplies at lowest possible cost; (2) protection of consumer and public against monopolistic practices; (3) federal leadership and co-operation by states, localities, and the private sector of the economy; (4) employment of research and technology to solve major energy problems; (5) integration of a national energy policy with a national resources policy.

—C. M. B.

New York State Considers Atomic Waste Disposal

Two decades of experience with atomic energy have demonstrated it is possible to carry on a large-scale atomic energy program with a high degree of safety, Oliver Townsend said in a talk before the chamber of commerce of Buffalo, New York, in April. Townsend, director of the Office of Atomic Development of the state of New York, stated he was in favor of high standards of safety in connection with atomic energy and thought other industrial operations could well pattern after them.

He pointed out that the exposure human beings are subjected to from X-ray machine radiation is about ten times what it is from the national atomic energy program in all of its aspects, including fallout from weapons test. Yet, Townsend remarked, in most places of the country the use of X-ray equipment is not subject to any kind of regulation, either local or federal. If an agreement is reached on weapons tests, Townsend said he feared world-wide attention might veer to the peaceful atomic industry. He said it may have already started. "I have seen two national magazine articles, a national television program, and a nationally syndicated comic strip that have featured rather flamboyant treatment of the radiation question as it relates to peaceful atomic development."

Townsend said he saw in this eventuality a danger to the full development of our atomic energy capabilities. Especially do we need to have atomic energy for the conquering of space, he said.

Talking of the possibility that New York state might be the site for radioactive wastes, the atomic director said he believed it was a good idea. He said he felt it would be in the interest of the public's health and safety to have a place where such wastes could be stored with absolute freedom from contamination. Also, he thought such a site would help foster the growth of the peaceful atomic industry. Townsend stated:

> I would like to make clear that what we are suggesting here is not something new and unheard of. Waste sites such as we are referring to already exist—and have existed now for over fifteen years . . . They function safely and effectively and have not polluted the environment in which they exist. . . .

Townsend reported that in New York state very low-level atomic wastes today are disposed of under regulated conditions and higher-level wastes are shipped to one of the AEC's established disposal areas.

The storage of high-level atomic wastes of the type produced by nuclear fuel processing plants through the erection of a special facility in New York state would possibly be the means of starting another important American industry, Townsend stated. He said his state had no intention of "establishing it unless and until there exists a definite plan for the construction by private industry within the state of a nuclear fuels reprocessing plant. . . . Our present thinking, in fact, is that the nuclear fuel reprocessing plant and the waste site we envision would be located at the same place."

The most favored proposed method for storing atomic waste materials at this time, Townsend declared, is the solidification of these reprocessing wastes into impermeable, nonleachable form and putting them in a place where they would

be immune to corrosion and erosion. He said the most desirable storage place seems to be a deep cavity in a salt deposit. Salt is favored because, as a fairly recent report of the congressional Joint Committee on Atomic Energy stated, salt occurs at great depths below the fresh-water table and has considerable compressive strength. Also excavations in salt are practically always dry, and, because of its plasticity, fractures in salt close rapidly.

THE AEC, Townsend said, is now experimenting with the feasibility of salt storage. He related there was a vast basin of salt underlying 10,000 square miles of the western portion of New York at depths of from 800 to 3,500 feet. One boundary of this salt site extends to within 30 miles of Buffalo's metropolitan area. He said, therefore, an industry based on this site could be supported by the industrial complex existing in Buffalo. Townsend said there are other areas in the state which his atomic energy office would investigate. He stated:

> I would like to emphasize that what I am talking about here is not just the one plant that I have mentioned, but the possibility of attracting to New York an at first small, but potentially major, new American industry.

HE said that for the immediate future there is only one opportunity for a new, privately owned fuel reprocessing plant to be built in this country. This plant, if it were built, would serve the nuclear fuels coming from the first round of privately owned atomic power plants which are located mainly in the northeastern United States.

However, within the next six months or so, Townsend said, he expected that there would be decisions by the government and private industrial groups as to whether or not two possible new reprocessing plants would be built.

Missouri River Basin Conflict

ON June 27th the *Wisconsin State Journal* carried an article by Basil C. Raffety, entitled "Battle for Water Develops in Missouri River Basin." Mr. Raffety states that the fight is a postscript to the project to harness the once dangerous Missouri. It involves the larger uses of water: irrigation, navigation, and production of hydroelectric power. In the past ten years, five dams have been built and a sixth is under way. Development of the water resources is now the problem since the threat of flooding along the main stream is past.

Mr. Raffety observes that in the Missouri basin, which includes one-seventh of the land area of the United States, the debate is now on as to how the water stored by dams should be used. The post-war Missouri basin development plan has already cost more than $2.5 million and if some of the changes now discussed are adopted one billion more could easily be spent.

THOSE living between Yankton, South Dakota, and the mouth of the Missouri generally approve of the present plan for using the stored water, Mr. Raffety contends. Nebraska (which is the only all-public power state in the nation) has a high priority on the federally produced power from the dams. Nebraska, therefore, is happy to get this power in the

summer when it will serve the pumps that are the backbone of a growing irrigation program. This summer use of stored water, Mr. Raffety observes, meets the approval of navigation interests since water used by the hydro power plants keeps the river navigable as far north as Sioux City, Iowa. Below Nebraska, the primary interest of the people is thriving river traffic. The major portion of electric power in this area is supplied by investor-owned companies.

THE dissenting area, Mr. Raffety states, is above Yankton, South Dakota. This area comprises northwest Iowa, western Minnesota, North and South Dakota, Montana, and the eastern part of Wyoming. In these areas there is a demand for power and a growing fear that Nebraska's priority for federal power will deprive them of the supply from hydro power plants in Montana and North and South Dakota. Mr. Raffety notes that rural electrification interests contend the present division of water is wasteful and they would prefer that more water be used for generation of power in the winter months when their peak loads occur, rather than during the summer

months when it serves navigation purposes.

Those who back the irrigation interests fear that commitments to navigation will starve out irrigation projects, such as the projected million-acre Garrison diversion project. This $600 million venture would take water from the Garrison reservoir in North Dakota to irrigate lands in central and eastern sections of the state. Mr. Raffety states:

> Irrigation interests have taken a more moderate stand than the rural electrification people. One evidence of this is their interest in a proposal to provide so-called slack-water navigation on the Missouri instead of the present open-water system.
>
> A slack-water system would require a series of locks and dams — at one time it was estimated 112 would be needed—along the Missouri. This would make it unnecessary to use stored water to maintain the river at navigable depth during the navigation season.

MR. RAFFETY observes that the catch in this scheme is the high cost. Projections, based on cost figures in the 1930's, would place the total cost near $1 billion today. Congress has directed the United States Corps of Engineers to study a slack-water system for the Missouri but the House has refused to appropriate additional funds for such a study. Assuming that such a project would be approved and the funds appropriated, Mr. Raffety states that it would take some twenty years to complete construction. At present the Missouri Basin Inter-Agency Committee is striving to find acceptable solutions to all of the problems of the basin. This committee is composed of representatives of the federal agencies and the states involved.

RAFFETY'S article sheds much light on the complex problems facing the development of any natural resource in which a number of groups have interests which are interwoven and frequently in opposition to each other. No simple solution ever is possible and the layman is apt to become entangled in the conflicting claims and voluminous testimony which accumulate. The Raffety article spotlights these major areas of conflict and avoids confusing entanglements.

Canadian Gas Forecast

W. H. DALTON, managing director of the Canadian Gas Association, has taken a look into the future in a speech delivered to that group at Toronto, entitled "Forecast for the Sixties." At the outset of his remarks, Mr. Dalton stated that he was not looking into the misty future but rather into the factual expansion of natural gas, based on past experience. He stated that the sale of gas has continued to go up and that all indications are that this trend will continue. This has been true in spite of a slow start and competing fuels. The public now has confidence in the ability of gas to do its job efficiently, safely, and economically, he stated.

The growth of natural gas production and sales in Canada, Mr. Dalton asserted, will continue because only a minority of the population of that nation has experienced the benefits of natural gas. In addition, growth can be expected due to the year-to-year increase in Canadian population. Regarding this growth he stated:

To prove that point, in 1955, average per capita consumption of natural gas in Canada stood at 7,500 cubic feet of gas—and the population was 15,698,000. Now last year, average per capita consumption increased to 16,200 cubic feet. Population meanwhile had jumped to 17,442,000.

So you have a double increase there. You have an increase of more than 100 per cent in the amount of gas consumed per person—and a jump of almost two million in the number of people in the country.

IT is Mr. Dalton's contention that by 1980 the population will have doubled and ten times as much gas will be used as in 1955. It is his estimate that in ten years' time 800 billion cubic feet of gas will be sold annually in Canada.

Reserves of gas in Canada are ample, Mr. Dalton stated, to meet this anticipated growth. It has been estimated that potential reserves in the Western basin alone come close to 300 trillion cubic feet and exploration and discovery are showing increasing signs of activity.

Mr. Dalton stressed that the Canadian gas industry is a huge enterprise, notwithstanding the tendency of those employed in it to consider only their particular segment of the total picture. As production of additional gas expands, such diversified segments of the total picture as the petrochemical industry and the sale of gas appliances will also reflect increases and expansion.

Mr. Dalton believes that the potential of the Canadian gas industry is so huge that it is difficult to imagine what it may grow into. He called upon the industry to keep in mind that whatever expansion may be, it is only part of what is possible for the industry to achieve.

Notes on Recent Publications

PUBLICATION of the eleventh volume of the annual series, *"Techniques of Plant Maintenance & Engineering—1960,"* has been announced by Clapp & Poliak, Inc. The volume is a report of the Plant Maintenance and Engineering Conference held earlier in the year in Philadelphia.

The book represents a major resource and reference volume in its field, and it reflects the growing importance of maintenance and engineering functions in industry. It reveals the approach by industry to the key production problem of keeping plants and machinery running at optimum efficiency.

This volume reports on the advance of automation from research and on the significance of automation in maintenance operations. In the book are reprinted the 34 papers presented at the 1960 conference, along with the text of all the discussions, all the comments, all the questions asked from the floor, and the answers from speakers and panel members. Nearly 2,000 practical, everyday problems are discussed and analyzed, with corrective solutions suggested. There were 833 questions answered in the sessions where papers were presented and more than 1,000 in ten round-table discussions. Ninety-seven tables, charts, graphs, and diagrams are reproduced.

Some of the topics covered include "How We Control Maintenance," "Industry Looks at Air Pollution Control," "Water Pollution—Its Effect on Natural Waters and Its Control," "Maintenance Problems of Small Plants," and "Labor Relations in Plants Having Union Workers."

The round tables included in the text are those of chemical plants, food processing plants, foundries, metalworking and metal fabricating plants, petroleum processing plants, pulp and paper mills, and research development and pilot plants.

WHAT OTHERS THINK

TECHNIQUES OF PLANT MAINTENANCE & ENGINEERING — 1960, published by Clapp & Poliak, Inc., 341 Madison avenue, New York 17, New York; 341 pp. Price, $10.

To combat some of the baffling technical terms surrounding "electronic brains," Industrial Division of Minneapolis-Honeywell Regulator Co. has published a pocket-size glossary intended to make computer language more intelligible to the layman. The booklet, entitled "Do You Talk 'Computerese'?" defines some 82 terms which instrument producers have very often created in the processes of their work on industrial process computers.

The pamphlet's compiler states in the foreword that a large number of blank stares are encountered whenever the conversation drifts into the area of computer's and compiler's technology. The company felt that some sort of glossary of these terms was needed to maintain adequate lines of communication. Such obscure terms as "binary coded decimal" and "binary digit" are explained in layman's language.

DO YOU TALK "COMPUTERESE"? by E. A. Murphy, Jr.; 24 pp. Minneapolis-Honeywell Regulator Co., Industrial Division, Philadelphia 44, Pennsylvania.

THE BROOKINGS INSTITUTION in Washington, D. C., recently issued the first one-volume account of national political party conventions since 1832. *"Convention Decisions and Voting Records"* summarizes in narrative style the convention high lights and analyzes key votes to indicate the degree to which delegates voting together on one roll call also tend to vote together on subsequent roll calls.

The introductory chapters are devoted to the rôle of the convention in the political cycle, the pros and cons of the convention system, and historic notes on the nomination process used in the United States before the convention system was established. An interesting appendix is contained which (1) tabulates the nominating ballots by state and (2) lists alphabetically the main and supporting leaders at the conventions with brief biographical details.

As a reference book this publication brings under one cover a great deal of information from widely scattered sources. For those who would enjoy doing a bit of forecasting, regarding the outcome of the nominating conventions, this book should provide valuable background and historic precedents, which may be applied to the present conventions and to the election, itself. The new offering by the Brookings Institution is intended as a companion volume to *"The Politics of National Party Conventions,"* published earlier this year.

CONVENTION DECISIONS AND VOTING RECORDS, by Richard C. Bain, The Brookings Institution, 722 Jackson place, N. W., Washington 6, D. C.; 440 pp. Price, $6.75.

THE American Gas Association Laboratories has issued a publication, Research Bulletin 82, which describes the influence of combustion chamber environmental conditions on the flame characteristics of water heater burners. *"Flame Characteristics of Gas Storage Water Heater Burners"* is a description of research conducted at the AGA Laboratories under the sponsorship of the association's committee on domestic gas research. Most of the previous publications issued by the AGA on this subject have been concerned with the flame characteristics of atmospheric gas burners under open room conditions. Only limited studies have been made of flame characteristics in combustion chambers.

The new bulletin reports on observations made on primary air injection, yellow tipping, and lifting of flames with natural gas using six contemporary burners under typical open room combustion chamber conditions. Representative heaters were used.

FLAME CHARACTERISTICS OF GAS STORAGE WATER HEATER BURNERS, by J. W. Gergel and J. C. Griffiths, available from the American Gas Association or AGA Laboratories, 1032 East 62nd street, Cleveland 3, Ohio. Catalogue No. 133/DR. Price, $2.

The March of Events

Gas Prices Too High, FPC Says

TENNESSEE GAS TRANSMISSION COMPANY should be allowed to continue to buy offshore natural gas, but only if the price is cut. This was a recent ruling of a Federal Power Commission examiner. He said that if this condition is met, Tennessee Gas, which is now buying gas under temporary authority, should be allowed to buy the gas on a permanent basis.

The company now buys 60.7 million cubic feet of gas a day from areas off the coast of Louisiana from Phillips Petroleum Company and Kerr-McGee Oil Industries, Inc., or indirectly through Commonwealth Oil Company.

The FPC examiner ruled that the original price at which the gas had been previously sold to Niagara Gas Transmission and which was passed on to Tennessee Gas, had not been adequately justified by the selling companies. His decision was to become final within thirty days unless the commission took it under review or some outsider challenged it.

AEC to Build Nuclear Power Plant Near Los Angeles

A PROPOSAL submitted jointly by Los Angeles and Pasadena to build a 50,000-kilowatt prototype nuclear power plant has been selected by the Atomic Energy Commission. General Electric will do the actual construction of the $12.5 million nuclear portion of the plant. It will use an improved version of the boiling water reactor.

Both Los Angeles and Pasadena will provide a plant site at San Francisquito canyon in Los Angeles county. They will build and operate conventional generating facilities for five years or more and will purchase the steam produced by the reactor. The reactor itself will be built by the AEC.

The commission is building the plant as part of its reactor demonstration program. It will be a prototype aimed at proving the economics and efficiency of one of the reactor concepts thought to contain much promise.

TVA to Pay $16.2 Million in Taxes

TVA's general manager has announced that the Tennessee Valley Authority and distributors will pay $16.2 million in taxes or in lieu of taxes to states, counties, and municipalities during the fiscal year ending June 30th. This is said to represent an increase of $1.4 million over such payments in the previous fiscal year.

TVA itself will pay $6.3 million in lieu of tax payments to seven states and 137 counties, an increase of $412,390 over last year. Power distributor payments are estimated to be $9.9 million, an increase of about $1 million.

These state governments will receive increased payments from TVA this year over last year: Kentucky, up $28,053; Tennessee, up $179,402; Alabama, up $173,983; Mississippi, up $28,589; North Carolina, up $3,336; and Virginia, up $1,180. Georgia's payment will remain the same as last year's.

Alabama

Giant New Power Plant

THE Southern Electric Generating Company is building a $134 million steam-generating plant on the Coosa river in Wilsonville, Shelby county. It is scheduled to be completed in 1962. When finished, it will have a total capacity of one million kilowatts and will be one of the largest in the world, able to provide power for the needs of more than two million homes.

The first of four 250,000-kilowatt generating units was placed in operation on May 1st and the second may be in place by the time this news item appears in print in July. There are also plans on the drawing board for units five and six.

Two 230,000-volt transmission lines will connect the plant with the Georgia Power Company system at points on the Alabama-Georgia border. Alabama Power Company is building its own 230,000-volt transmission line to connect the plant with its system.

California

Half-billion Transit Plan

THE Metropolitan Transit Authority of Los Angeles has had a $529.7 million transit system recommended to it by a concern of consulting engineers. The system outlined would have aircraft-type cars running on overhead and grade level concrete tracks over a 74.9-mile network, which would extend from the Los Angeles business district to Santa Monica, Long Beach, Reseda, and Covina.

It was not indicated definitely when construction of the unusual concrete elevated would be started or how long it would take to complete it, but the engineering company said it thought it would require about five years.

The views of all concerned will be sought before any action is taken on the recommendation, according to C. M. Gilliss, MTA executive director. And such matters as financing, of course, will have to be gone into. Gilliss said he doubted whether any work on the system could be undertaken before 1962 or 1963.

Georgia

Seeks Lower Rates

THE Atlanta Gas Light Company has asked the Federal Power Commission for permission to roll back price increases put into effect by Southern Natural Gas Company. A spokesman for the Atlanta concern told the FPC his company wants to reduce gas costs to its customers but has been unable to do so because of Southern Natural's price boosts.

Southern Natural supplies gas to Atlanta Gas Light as well as to two other distributors in the state. A series of price rises have been made effective under bond

by Southern Natural and the distributing companies have passed the increase along to their customers.

Since April, 1958, Atlanta Gas Light has sustained gas price increases from Southern Natural that equal 52.3 per cent, according to a company representative of the Atlanta concern.

Louisiana

Passes Utility Tax Bill

THE Louisiana legislature has passed a bill which would permit public utility companies to pass along to local consumers any gross receipts taxes levied by municipalities.

The measure was specially interesting to New Orleans, which has a total of 5 per cent gross receipts tax on Southern Bell Telephone & Telegraph Company. Of this amount, 2 per cent, levied in recent years, has been the object of a court dispute between Southern Bell and the city. Two years ago New Orleans and the Bell company reached an agreement whereby the company would agree to the tax if it could be passed on to local consumers.

In 1958 the state public service commission voted 2 to 1 against the proposal.

Maryland

Propane Plant OK'd

THE Baltimore Gas & Electric Company has been authorized to build and operate an underground propane gas storage plant in Baltimore county. The facility would be located on a 44.7-acre site at Harford Road and the south bank of the Big Gunpowder Falls. It is said it would not interfere with the development of the Gunpowder River Valley State Park. Baltimore County Zoning Commissioner Wilsie H. Adams said in his order, "It is the opinion of the zoning commissioner that since the property has a nonconforming use for quarrying purposes and that this use will be abandoned in favor of propane gas storage, the plant will be an asset to the general public."

Propane gas is used in the Baltimore county area during peak winter consumption months, a company spokesman explained.

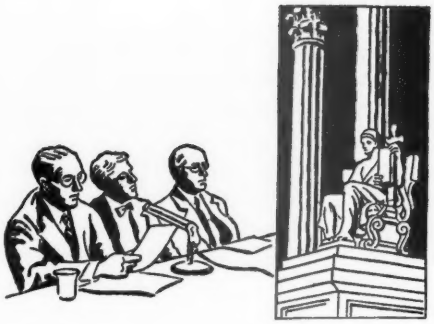
Michigan

Fight over Gas Distribution

A MOVE by Panhandle Eastern Pipe Line Company to contract to sell gas directly to the Rouge plant of the Ford Motor Company threatens to precipitate a battle over gas distribution in the area. Such a contract would take away from Michigan Consolidated Gas Company one of its biggest industrial customers.

Apparently the loss of this one customer is not the only damage that will be done. According to Hugh C. Daly, Michigan Consolidated vice president, if Panhandle is permitted to sell to Ford at prices not under federal regulation, the public service commission will be called upon to reduce the company's industrial rates to treat all industries, big and small, on an equal basis. This will mean a $3.5 million loss in revenue for Michigan Consolidated. Then the company would have to apply for higher rates for small users, principally home owners. It would mean an increase in their rates of $5.50 annually.

Daly said he understood the contract offered to Ford by Panhandle called for 35 cents a thousand feet for gas. Michigan Consolidated has been selling to Ford at 42 cents. The Ford company figures it can save about $177,000 a year by buying direct from Panhandle.



Progress of Regulation

Trends and Topics

Service Denial Because of Unsafe or Objectionable Installations or Appliances

DECISIONS in three recently reported cases deal with the right of a public utility company to refuse service because of objectionable installations and unsafe appliances. A Louisiana court held that a gas company was not arbitrary or capricious in refusing to run a second gas line to a building to serve apartments in one end of it, where overwhelming evidence showed that it would be most hazardous to install more than one line to any one building (33 PUR3d 108).

The New Jersey commission denied a petition by the owner of an apartment house to compel a gas company to restore service previously discontinued because of improper installation of appliances. The commission upheld the company's regulations setting forth standard specifications for installation of gas appliances and particularly prohibiting the installation of water heaters in bathrooms, bedrooms, or any occupied rooms normally kept closed. The commission said that the company would be remiss in its duty to safeguard the public interest if it were to provide service after discovering such a condition (33 PUR3d 174).

The Missouri commission denied a petition for an order requiring a gas and electric company to provide service to a partially erected dwelling house where there was a very short distance between the company's conductors and the ridge of the roof of the house, so that service would increase the fire hazard and also expedite the completion and occupancy of the dwelling, which would further contribute to the hazard (32 PUR3d 417).

Unsafe Wiring and Connections

The refusal of an electric company to render service to premises where reasonable rules promulgated by the utility as to safe wiring had not been complied with was held by the Alabama supreme court to be justified (PUR1930C 126). A rule requiring the installation of a type of service

entrance switchbox approved by the company and the grounding of wires in accordance with the terms of the company's requirement was held by the Vermont supreme court to be reasonable as a condition precedent to extending service (PUR1925C 128).

A New York court upheld the right of an electric company to refuse service without a certificate from the board of fire underwriters certifying to the sufficiency and safety of the consumer's equipment, although such certificate could not be procured without the payment of a fee, since, if the utility elected to inspect the equipment, it would have been entitled to make a reasonable charge (PUR1916A 949).

The New Jersey commission ruled that an electric company may refuse service when a switchbox or safety cabinet does not conform with specifications drawn for the purpose of standardizing equipment (PUR1921D 703).

A California court ruled that an electric company had a legal right to discontinue service to a customer, pursuant to a filed rule, where the meter was so located that it could not be read properly and the customer refused to put the meter in an accessible location (37 PUR NS 115). The California commission held that an electric company may refuse to furnish service to a dwelling having defective wiring, where to furnish such service would violate a municipal ordinance or regulation, as well as the company's filed tariff (9 PUR3d 269).

An electric utility, according to the Wisconsin commission, should be permitted to refuse service to electrically operated water heaters which do not meet its requirements as to size (91 PUR NS 48).

The South Carolina supreme court decided that a power company is justified in discontinuing service to a customer without notice and without giving reasonable opportunity to repair defective wiring where the city electrical inspector has notified the company that a dangerous situation exists on the premises and has instructed it to discontinue service immediately. The court also ruled that a city electrical inspector may properly cut off service or direct others to do so without resorting to criminal processes provided for enforcement of an ordinance which gives the inspector the right to order the removal of any defective electrical equipment he deems dangerous, since the ordinance was enacted in the exercise of the police power for the safety of the public (7 PUR3d 545).

Exceptions to General Rule

The Colorado commission once said that it would not, on complaint of a municipality that the wiring of a building was unsafe, order a public utility to discontinue furnishing electric current, where the city had an ordinance requiring proper wiring which it could enforce (PUR1917D 272).

The sole electric utility in rural territory was not permitted by the Illinois commission to abandon service to an unremunerative consumer refusing to repair and maintain in safe condition his service line connecting with the transmission line. The utility might itself be required to repair the wire upon the consumer guaranteeing a reasonable minimum bill (PUR1916D 1093).

The North Carolina supreme court held that an electric customer who has through a period of years received service over a line connecting with an electric utility's transmission line, which service has been suspended for nonpayment, has a right to restoration of service, upon payment of charges, without complying with a condition imposed by the utility that the customer repair the line, if the utility has not obtained an order from the commission authorizing denial of service (17 PUR NS 524).

The North Carolina commission ruled that an electric company could not refuse adequate service to certain residential customers because their lines were constructed from No. 8 wire which the company claimed could not safely carry the current desired, where such wire was the same size as that used by the company for other such service extensions, and where it was the minimum requirement of the National Electric Code. Moreover, the commission ruled that the company could not refuse service to certain residential sections because transformers on the customers' lines were claimed to be inadequate to carry the current required, where it was shown that the company furnished other customers of the same class with transformers and had no rate schedule on file to signify a contrary policy (PUR1929E 625).

Review of Current Cases

Agreement to Gas Price Increase Not a New Contract under Favored Nation Clause

THE U. S. Supreme Court has reversed and remanded the court of appeals judgment (28 PUR3d 164) which overturned the Federal Power Commission decision (22 PUR3d 94) in the controversy between Shell Oil Company and Texas Gas Transmission Corporation over producer rates. The key question was whether a "favored nation" clause in the contract between these companies triggered a price increase when Atlantic Refining Company began paying an increased price for gas purchased from Shell.

Shell and Texas Gas had entered into a contract dated May 1, 1951, providing for a price of 8.997 per Mcf, unless the buyer should thereafter enter into a contract for the purchase of other gas within a 50-mile radius, whereupon the price would be escalated to the price established under the subsequent contract. Atlantic's contract with Shell, dated in 1943, specified a price effective for the first five years and provided that during succeeding five-year periods prices to be paid would be determined at the beginning of each period, and the price to be paid was to be agreed upon after a survey of prevailing prices for gas being sold in similar quantities in the southwestern part of Louisiana. The contract provided that if the parties were unable to agree, the determination should be submitted to arbitration.

Negotiations between Atlantic and Texas Gas as to the price to be effective for the five-year period beginning September 1, 1953, terminated with a letter agreement dated February 17, 1954,

which recited that it was agreed that the price to be paid should be 12.2 cents net plus .3 cent for severance tax, or 12.5 cents. It was this letter agreement which Shell contended triggered the "favored nation" clause.

Decision by Commission

A commission examiner held that Atlantic by the letter agreement had entered into an agreement within the meaning of the "favored nation" clause and that this had escalated the Shell price to 12.5 cents. The commission reversed the examiner's decision and determined that the effective price on June 7, 1954, was 8.997 cents per Mcf, the price fixed in the agreement. A petition for rehearing was denied.

Reversal by Court of Appeals

The court of appeals vacated the commission's order, holding that the letter agreement triggered the price increase. The court of appeals stressed that Shell's objective was to assure itself a top price for its gas and said that the facts tended to show that the intention of the parties was for any higher price paid by Texas Gas to another producer to trigger a rise on the Shell contract to the same figure.

Grounds for Reversal

The Supreme Court thought the contract demonstrated the contrary, and found the record barren of any other evidence which would support the lower court's conclusion. The court recognized that Shell desired to protect itself during so extended a contract period by provisions for price increases; and it did so. Indeed, in this respect the contract was a "one-way street." Shell was guaranteed automatic periodic step increases, but there was no provision allowing Texas Gas the possibility of a price decrease.

Shell had made other contracts with "favored nation" clauses, triggered by "every higher price paid" by the buyer to other producers. In contrast Shell conceded that this "favored nation" clause would not be triggered by higher prices paid by Texas Gas to other producers under pre-existing contracts by way of automatic increases or increases mathematically determined.

The Supreme Court, therefore, held that the court of appeals erred in its interpretation of the "favored nation" clause and that the commission correctly construed it as not effecting an increase in price by reason of the letter agreement. The court decided that the parties to the Shell contract did not mean that an agreement of the nature of the Atlantic letter agreement should constitute the "entering into a contract" providing for the purchase of gas.

Scope of Review

At the outset the court assumed that the court of appeals did not treat the commission's order as one which it was required to accept if reasonably supported in the record, and instead considered that it could examine de novo the question of the proper interpretation to be given the Shell "favored nation" clause. It had been argued that the court of appeals exceeded the allowable limits of judicial review because the commission's interpretation of the clause reflected the "application of its expert knowledge and judgment to a highly technical field," so that the court of appeals was required to accept the commission's interpretation if it had warrant in the record and a reasonable basis in law.

The record, however, did not disclose that the commission arrived at its interpretation on the basis of specialized knowledge gained from experience in the regulation of the natural gas business or

upon the basis of any trade practice concerning "favored nation" clauses. On the contrary, the opinions of the examiner and the commission showed that both treated the question as one to be determined simply by the application of ordinary rules of contract construction. The court of appeals, therefore, was justified in making its own independent determination of the correct application of the governing principles.

Further Question to Be Decided

One argument by Shell, according to the court of appeals, did not have to be decided. This was the contention that the 1943 Atlantic agreement did not provide for a fixed and determined price beyond the first five-year period, so that under applicable state law enforceability was suspended until the contract price for a particular succeeding five-year term was supplied by agreement or arbitration. From this premise it was argued that when the second five-year period came to an end on August 31, 1953, neither Atlantic nor Texas Gas was under any enforceable obligation to continue the prior relationship, and, therefore, when on February 17, 1954, Texas Gas signed the letter agreement, it was not acting pursuant to any pre-existing obligation but was exercising its free choice to enter what was, in effect, a new contract.

The commission argued that not only was there no doubt about the enforceability of the Atlantic contract but that the issue was immaterial because the parties to that contract treated the contract as binding. The commission, however, suggested that should the Supreme Court reverse the court of appeals decision, premised as it was upon the assumption that the 1943 Atlantic contract imposed a binding obligation for its entire stated term, and if the court considered the question of enforceability to be material, there should be a remand of the issue of enforceability to the court of appeals for its decision.

The Supreme Court agreed that it was appropriate that the court of appeals address itself to the enforceability issue, if it was material, but under the circumstances it thought the court of appeals should first decide the question of materiality. The judgment was, therefore, reversed and remanded for further proceedings consistent with the opinion. *Texas Gas Transmission Corp. et al. v. Shell Oil Co. Nos. 167, 170, June 13, 1960.*

"Flow Through" for § 167 Taxes, Normalization For § 168 Taxes

THE North Dakota supreme court recently upheld the commission in its rejection of normalization of federal income taxes with respect to § 167 of the Internal Revenue Code, but held that normalization should be allowed for § 168 taxes.

The court could find no congressional intent, as to § 167, to defer income taxes and provide the taxpayer with an interest-free loan during the early years of the life of an asset. Congress more probably sought to encourage investment by permitting computation of depreciation upon a basis which more nearly approximated actual depreciation than the straight-line method, the court said.

However, the situation under § 168 was different. The intent, there, was to benefit the company and not consumers. The court held that refusal to permit normalization would nullify congressional

action by destroying the incentive for emergency construction which Congress deemed essential to the national economy.

Average Figures

The case had been appealed from a commission order denying an electric rate increase. The commission had not erred, held the court, in using average figures to arrive at the rate base instead of using year-end figures. Likewise, where average plant valuation is used in computing the rate base for a specific year, only average plant depreciation should be allowed for that year.

Additions to Income

The commission had added to the utility's income a credit to cover rentals the utility should have received for space occupied by its merchandising departments and another credit for servicing the merchandise accounts. The court held that the commission's method of arriving at the dollar amounts of the credits could not stand.

Subsidiary's Excess Profit

The court also held that the commission had erred in crediting utility income with an amount it found to be excess profit earned by the utility's subsidiary. Although the commission, if it found that the utility had paid its subsidiary an excessive price for supplies purchased, could have reduced the price, it had no authority to apportion a part of the subsidiary's profits to the utility.

Computation of Income

The commission had found that a return of 5.71 per cent was reasonable. However, it had added the tax savings due to rapid amortization of defense facilities under § 168 of the Internal Revenue Code to income. When the court found that the addition of that amount was error, the return fell to 4.6 plus per cent, necessitating a remand for a new finding as to the rate of return. The commission's determination of the actual rate of return earned by the utility in 1956, said the court, was but a point of departure in determining whether the rates charged in 1956 would continue to earn a fair rate of return in the immediate future.

In making such determination, the commission should take into consideration all anticipated increases in the rate base and operating expenses, as well as estimated increases in income. The comparative operating statistics submitted by the utility showed that the annual increase in income over a period of years was sufficient to compensate for the annual increases in rate base and expenses. The commission had not erred in finding that the established trend would continue. Such a finding necessarily included a consideration of anticipated increases both in rate base and cost of operation. *Re Montana-Dakota Utilities Co. Minneapolis, Minnesota, 102 NW2d 329.*

Commission Order on Remand

On remand from the court, the North Dakota commission reaffirmed its denial of an increase. The commission held that the company had not met the burden of proving that the proposed new rates were just and reasonable. On the basis of evidence submitted at the hearing, the commission found that the return earned during the test year 1956 was 4.6 per cent plus without regard to the amount resulting from the use of owned or rental space

of the utility for merchandising display purposes.

The evidence showed that revenues from the company's electrical department alone exceeded total operating expenses of all departments. Earnings were in an improving trend, as was the company's ability to raise capital. *Re Montana-Dakota Utilities Co. Minneapolis, Minnesota, Case No. 5576, May 26, 1960.*

Refusal to Normalize Test Year Justified

THE Rhode Island supreme court dismissed an appeal from an order of the public utility administrator granting a water company increased rates. The mere fact that normalization of the test period might have resulted in a more reasonable rate to the appellants, pointed out the court, is not sufficient ground for judicial interference with the administrative process.

That the result reached by that process contained infirmities is of no importance if the rate itself is fair and reasonable. The test year used by the administrator had not resulted in a manifestly unfair and unreasonable rate. It was presumed reasonable until the contrary was proven. The appellant had not met the burden of showing by clear and convincing evidence that the water company's rate was unfair.

The court held also that there was proper evidence on which the administrator could base his finding that the company was entitled to a ratio of 60 per cent debt and 40 per cent equity. *Town of Bristol et al. v. Michael et al. 158 A2d 881.*

Colorado Commission Adopts "Flow Through"; Adds Attrition Increment to Return

THE Colorado commission has adopted the "flow-through" theory in the treatment of accelerated depreciation stemming from a utility's election under §§ 167 and 168 of the Internal Revenue Code of 1954. It rejected normalization and other methods as inconsistent with a sound, classical approach to regulatory rate making.

Allowing fictitious expenditures, said the commission, would pose a dilemma either of adjusting calculations on cost of money and rate of return, or of allowing a windfall to the company, both inconsistent with the concept of a utility as a "cost plus" operation, a theory which the commission supported.

Only those taxes actually paid were allowed as an operating revenue deduction during the test year. There remained, however, the amounts accumulated in the restricted surplus account prior to the adoption of the "flow-through" theory. These amounts represented both § 167 and § 168 deferrals. The commission considered it impractical, if not impossible, to effect a flow through of the tax savings for the prior years.

In order to achieve the most practical result in economic benefit to the ratepayer, it directed that the restricted surplus account, except for the credits during the test year, be deducted from the rate base. The credit during the test year for deferred income taxes was credited against the normalized taxes as an operating expense.

Return Allowance

To arrive at a fair rate of return, the

commission took conditions as they existed at the end of the test year, as to capital structure and as to cost of capital. It found that a return of 6.15 per cent on an original cost rate base was fair.

In addition, an attrition and erosion increment was added, but the commission made it clear that the increment was not to be embedded in the fair rate of return. Rather, the additional allowances were necessary to achieve the fair rate of return the commission had found reasonable. An attrition factor of two-tenths of one per cent was applied.

Customer Advances

The commission pointed out that, normally, the entire amount of customer advances should be deducted from the rate base since such sums constitute cost-free capital. But in the instant case, an adjustment was called for. If the commission had considered repayment by the company on a normalized basis, it would have averaged out that one-half of the amount of the fund would have been cost-free capital to the company. Making allowance, however, for the fact that the company would give ample time to the customer to effect a usage equal to the amount of his advance, the commission believed it fair to credit the company with an additional 10 per cent, and allow a deduction only of 40 per cent of the amount of the fund from the rate base.

Acquisition Adjustment

The company had included its acquisition adjustment account in the rate base, and it had amortized the account on a 15-year basis. The commission refused to allow treatment of acquisition adjustment in this manner. Acquisition adjustment may be allowed in the rate base, the commission held, and not amortized, or vice versa. Both, however, may not be allowed. Accordingly, the commission disallowed the plant acquisition adjustment in the rate base.

Working Capital

Where the source of funds is other than investor capital, the commission held, as distinguished from the mere legal title to the money, the benefit should redound to the ratepayer. The commission reiterated its basic thinking that a utility is in the nature of a "cost plus" operation. Therefore, the company's working capital requirements were adjusted downward. *Re Public Service Co. of Colorado, Application No. 17406, Decision No. 54367, May 27, 1960.*

Commission Order Directing Railroad Train Stop System Recycling Upheld

THE Illinois supreme court has upheld a commission order directing a power company to contribute to the cost of changing a railroad train stop system. The court pointed out that the commission has statutory authority to require changes, additions, and improvements in connection with the facilities of existing utilities to promote the security and safety of employees and the public.

The authority for the exercise of jurisdiction over the electric company, said the court, is not that it has acted negligently or with malice. Rather, commission power arises from the fact that the exercise of the electric company's franchise by the transmission of current in close proximity to the railroad tracks created a condition which caused the existence of false signals and such signals

constituted a hazard to the safety of the public and the employees of the railroad. Such condition gives rise to power and jurisdiction in the commission without regard to fault on the part of either public utility.

The commission order had directed a change from 60- to 100-cycle current and had apportioned the cost equally between the railroad and the electric company. The court could not say that such order was arbitrary or unreasonable, or against the weight of the evidence. It had been conceded by all witnesses that the most economically feasible solution to the hazard to public safety was the conversion to 100-cycle current.

Interference with Interstate Commerce

The court held that the conversion would not violate any order or regulation of the Interstate Commerce Commission. State action affecting interstate commerce, said the court, is precluded in three types of situations. One is where state action directly burdens interstate commerce, another is where state action conflicts with federal regulations, and still another is where Congress has evidenced an intent to completely pre-empt the area of regulation involved.

The exercise of the police power, in the instant case, neither burdened interstate commerce nor conflicted with any federal act or regulation.

The Illinois supreme court pointed out that it was not called upon to determine the extent to which the commission could supplement or add to the federal requirements for train stop systems. It had only to decide that the commission could choose the most economically feasible manner of eliminating the hazard, when such a choice required action that was clearly permissible under federal law. *Central Illinois Pub. Service Co. v. Illinois Commerce Commission ex rel. Illinois C. R. Co. 165 NE2d 322.*

Excess Earnings as Factor in Rate Case

THE Washington commission held that, under an applicable statute, it was merely required to take official notice of net operating income in excess of a reasonable return in the consecutive five-year period immediately preceding its order. It was further required to take official notice of whether such excess earnings were invested in the company's plant or otherwise used for purposes beneficial to the consumers.

However, the commission refused to forego a rate adjustment until such time as the excess earnings had been amortized, or to treat it as a rate base deduction until the excess was extinguished, or to consider it in determining the proper pay-out ratio.

The commission noted a line of judicial opinion to the effect that past excess earnings could not be utilized to establish confiscatory rates for the future inasmuch as this would result in a deprivation of property without due process.

Restricted Surplus

The company had elected to utilize accelerated amortization for certain defense facilities. The staff contended that the resulting restricted surplus should be excluded from the rate base, or if included accorded a zero cost of capital.

The commission acknowledged that the proper treatment of the account was one of the most controversial subjects today. It noted that the position that restricted earned surplus should not be deducted from the rate base was supported by at

least one federal regulatory agency and decisions of federal and state courts. It included the account in the rate base.

Apportionment

The commission adopted the staff's one-third method of determining allocations between the company's services and between states. Under this method, items of expense in plant between the operations and the states were apportioned on a ratio giving one-third weight each to directly assigned plant, to operating revenues, and to direct labor.

Business and Occupation Taxes

In the past, the company had treated business and occupation taxes levied by municipalities as operating revenue deductions and had not passed them on to customers in the cities levying the taxes. The commission treated such taxes, in this proceeding, as if they had, in fact, been passed on or charged below the line. To hold otherwise, said the commission, would mean that all the customers of the company would help to pay a tax that should be borne by customers resident in the cities imposing the tax. The company was directed to pass on such taxes in the future.

Rate Base

The commission found that a return within the zone of 5.75 per cent to 5.9 per cent was reasonable, when applied to an original cost rate base. Original cost was held to be the most accurate and just method.

Trended original cost was rejected as unrealistic and unsound. *Washington Pub. Service Commission v. Washington Water Power Co. Cause No. U-9143, April 21, 1960.*

Television Signal Transmission by Telephone Company Called Telephonic Service and Rates Approved

THE New York commission has authorized the New York Telephone Company to put into effect proposed rates, previously suspended, for a new television signal transmission service to community antenna television companies in areas where signals are weak or of poor quality. The telephone company does not propose to serve owners of television sets directly, but only antenna companies which, in turn, sell their service to individuals.

An antenna company ordinarily builds a tower or master antenna at some location where signals can be received near the community to be served. Signals are carried from the antenna by means of a distribution system consisting of a coaxial cable and cable drops to the premises of the antenna company's patrons. It is the coaxial cable distribution system which New York Telephone proposed to furnish.

Under the company's filed tariff, service would be undertaken for a minimum period of ten years. In the event a customer discontinued taking service during this period, a termination charge would be payable. In order to assure payment of the termination charge, antenna companies would be required to deposit an amount equal to the estimated cost of the cable construction. The deposit would be reduced periodically so that it would be equal to the current termination charge. A rate of $35 a month for each one-fourth mile of aerial cable would be charged, together with a $20 installation charge and 60 cents a month, for each cable drop to individual premises.

Under this arrangement, the company

would not use any of its own funds in constructing the aerial cable or in refunding deposits. The reasonableness of the charges must therefore be determined with reference to criteria other than return on investment, the commission observed. Figuring depreciation on a 10 per cent basis and interest on deposits at 4 per cent, it appeared that New York Telephone would earn about 4.1 per cent on the cost of the property. The commission thought this a reasonable payment for providing the service, keeping the facilities in operating condition, and bearing the risk of making any necessary property replacements with its own funds.

Filing of Rates

It is clear, said the commission, that the telephone company is undertaking to transmit intelligence from one point to another for the benefit of a subscriber, using principles of telephony or telegraphy. The company had proposed to provide this service upon similar terms to anyone seeking it. The commission held that the service was a telephonic service, subject to its jurisdiction. The filing of rates by the company, protested by certain antenna companies fearing competition from subscribers to the service, was therefore proper. *Re New York Teleph. Co. Case 19906, April 28, 1960.*

Rail Agency Is Merely Incidental Service and Financial Loss May Compel Discontinuance

THE Arizona supreme court sustained a reversal of a commission order which denied Southern Pacific Company permission to discontinue a railroad agency and substitute a nonagency station. The court said it was unreasonable to require the maintenance of an agency station when the cost of service was out of proportion to the revenue derived from a small portion of the public benefiting from the service.

The agency served the city of Tombstone, an incorporated city of about 1,400 population. Tombstone is located on a branch line about 10 miles from Fairbank, where an agency is maintained. Other transportation facilities are available in Tombstone. The daily time consumed by the Tombstone agent was only about one-half hour. Discontinuing this agency would save the railroad about $6,000 a year. The court pointed out that the essential issue is whether the public good derived from the agency station overcomes the loss sustained in its operation as such. When a railroad seeks to discontinue a transportation service, the question of expense is of little importance. But the duty to maintain an agent at a station is at most only incidental to the railroad's primary duty to furnish transportation, and expense often assumes controlling importance in the maintenance of such an incidental service.

The evidence indicated an uneconomic service resulting in an economic waste, and one that could not be justified in the convenience of a few individuals. The court colorfully observed that "Tombstone, 'the town too tough to die,' having survived the vicissitudes of Geronimo and the gun fight at the O.K. Corral, is equal to the occasion and will take the loss of its station agent in its stride." *Arizona Corp. Commission v. Southern P. Co. 350 P2d 765.*

Electric Rate Boost Upheld and Court Rehearing Denied

THE city of Columbus has been denied a rehearing on the recent decision of the Ohio supreme court upholding an Ohio commission order granting the Columbus & Southern Ohio Electric Company an increase in residential and small commercial consumer electric rates. The opinion marked a defeat for the city in its attempt to block an estimated $4 million-a-year boost in electric rates, effective last August.

In its decision denying the rehearing, the court held that the commission's order was "neither unreasonable nor unlawful." It said the company was entitled to a 6 per cent return for city service and 4.7 per cent for county service, for an average of 5.8 per cent. The commission had said the old rates, proposed by the Columbus city council in February, 1959, were insufficient. It said these allowed a 4.5 per cent return for city service and 3.8 per cent for county service, for an average of 4.4 per cent. The state supreme court had previously rejected a request by the city to delay collection of the higher rates pending hearing of the city's appeal on its merits. *City of Columbus v. Ohio Pub. Utilities Commission et al. decided June 30, 1960, on petition for rehearing.*

Natural Gas Tax Struck Down in Lower State Court

FOR the second time a Texas tax on natural gas at the wellhead has been struck down by the courts. The governor and the attorney general say they will carry the case to the Supreme Court if necessary, but prospects for final upholding of the constitutionality of the tax appear indifferent. Texas District Judge Roberts found that the $15 million-a-year severance beneficiary tax, enacted last year, is "unconstitutional as violative of the commerce clause of the United States Constitution." He found that the tax is identical in effect with the gas gathering tax of 1951 which he had declared unconstitutional some years earlier.

The legislature, on request of the governor, passed the measure with misgivings last summer during the called session. The governor believed that it was so drawn as to "avoid the pitfalls" of the earlier tax bill. However, Judge Roberts found the difference in the two to be a matter of semantics; that essentially they were the same. While the severance beneficiary tax would have been paid ultimately by the consumer, no doubt, including Texas consumers, there was still found to be a burden on interstate commerce.

Only 44 per cent to 45 per cent of Texas gas is exported. The prospective loss of $15 million revenue annually adds gravity to the fiscal predicament of the state whose general revenue fund is currently $47.5 million in the red. *Tennessee Gas Transmission Co., Transcontinental Gas Pipe Line Corp., Northern Natural Gas Co., Panhandle Eastern Pipe Line Co., and Permian Basin Pipeline Co. v. Texas.*

Municipal Interference with Interstate Pipeline Held Unconstitutional

A FEDERAL district court held unconstitutional a municipal zoning ordinance which would prevent New York State Natural Gas Corporation, a pipeline operating under federal authority, from constructing metering equipment and necessary housing for it at the terminus of its pipeline where it delivered gas to a retail customer. The ordinance, as applied to the pipeline, was an undue burden on interstate commerce, and the court enjoined the municipality from interfering with construction.

The pipeline company presented sound engineering evidence that it was reasonably necessary for the equipment and housing to be constructed at the terminus of the line rather than at some other point. No contradictory testimony on this question was offered by the municipality. Nor did it show any inherent danger to the health, safety, or well-being of the community, or even unsightliness, from the installations. It appeared, moreover, that the installations would be located immediately adjacent to an existing nonconforming use by the pipeline's customer.

Police Power and Interstate Commerce

The court recognized an indisputable local interest in controlling the environmental development of the community which is expressed in the power to enact zoning ordinances. Neither the commerce clause of the Constitution nor the Natural Gas Act exempts interstate commerce from reasonable local zoning regulation. Only if a particular site is reasonably necessary, as in this case, for the proposed construction of equipment and buildings ancillary to an interstate pipeline should a local zoning ordinance forbidding such construction on the particular site be struck down, said the court. Bearing on the question of reasonable necessity are such factors as the availability of an alternative site, the degree of harm to the local area which would result from the construction, and the comparative advantages of various sites, the terms of efficiency and safety.

The court pointed out that the police power of a state does not include the power absolutely to prevent the construction of reasonably necessary equipment at the point of delivery by a federally authorized pipeline where the customer taking delivery is itself engaged in a nonconforming use in the area and where there is no evidence of substantial danger to local health, safety, or welfare. *New York State Nat. Gas Corp. v. Town of Elma, 182 F Supp 1.*

Failure to Relinquish Telephone Line For Emergency Call

THE New Jersey commission has held that failure of a party-line subscriber to relinquish the line for an emergency call by another party constitutes abuse and improper use of the service and facilities so as to furnish reasonable grounds for anticipating future violations and discontinuing service, where the customers involved continue to subscribe to party-line service.

However, the customers involved in this case had subsequently subscribed to individual line service. Because the line could no longer be used to the detriment

of a party-line subscriber, refusal to serve was no longer warranted.

The company was directed to prepare and send to all subscribers to party-line service a notice containing the provisions of its tariff and the law governing failure to relinquish party lines to permit emergency calls. In future customer applications for party-line service, the company was directed to include a statement to the effect that under emergency conditions a user of a party line must surrender the line or be subject to prosecution under the Disorderly Persons Act. *New Jersey Bell Teleph. Co. v. Zelinski et al. Docket No. 601-32, May 6, 1960.*

Proof of Market Requirement Requisite To Supplemental Gas Supply

A U. S. appeals court ruled that the refusal of the Federal Power Commission to grant Lynchburg Gas Company a supplemental gas supply from Transcontinental Gas Pipe Line Corporation should be sustained on the ground that the applicant failed to show a market for the requested gas. It could not present a firm commitment from a large industrial user, for whom the gas was intended.

Along with this failure of market proof, the commission had based its refusal to issue a certificate on two other grounds: (1) The end use of the gas was "inferior" in that it would be used as boiler fuel for commercial production rather than in the heating of homes, and (2) the pioneer certificated supplier in the area, Atlantic Seaboard Corporation, presently supplying Lynchburg, should be protected from economic injury.

The court rejected these two grounds. It pointed out that the "inferior" end-use consideration had been laid to rest by the Consolidated Edison Company decision (31 PUR3d 332). Seaboard had objected to the supplemental supply, urging that its sales to Lynchburg might be displaced in some measure by the proposed supplemental supply. But Seaboard's main opposition issued from the fact that it did not know what would develop from an award of the desired gas, in view of the absence of any firm commitment from the industrial user. The court thought this position was weak.

Presumably Lynchburg will initiate new proceedings if it is successful in procuring an agreement with the industrial user. Such agreement would greatly reduce speculation as to injury to Seaboard. As of now, said the court, any alleged injury to Seaboard is speculative. *Lynchburg Gas Co. v. Federal Power Commission, 275 F2d 847.*

Commission Denies Request to Change Telephone Exchange Boundaries

THE Missouri commission denied the request of customers of one telephone company for service from another company. In order to authorize such service, the commission would have had to change the filed service area maps of the respective companies, a thing which it refused to do.

Once service areas have been established, said the commission, they should

remain undisturbed unless it is clearly shown that they are arbitrary and unreasonable. Nothing in the proceedings indicated that the common boundary was improper or that the petitioners had been discriminated against by the location of the boundary lines.

The mere wishes of an individual or a group of individuals to receive service from a certain exchange, regardless of the fact that that exchange may be in the town that is the center of the trade territory and in which the largest part of one's business is transacted, is not sufficient reason to subtract territory from one company's service area and add to another's. *Subscribers v. Speed Teleph. Co. et al. Case No. 14,341, May 2, 1960.*

Other Recent Rulings

Jurisdictional Facts Determined. The commission has authority to determine whether facts exist upon which it may take jurisdiction, the California commission ruled in denying motions by public agencies seeking dismissal as to them in a crossing allocation proceeding. *Re City of Mountain View, Decision No. 60071, Application No. 41467, May 9, 1960.*

Evidence of Need for Service. The fact that a taxi operator had for a long time conducted an unauthorized, though limited, service as a contract carrier of passengers was some evidence of a need for the service and an indication that the competitive situation would not be materially affected by the granting of a certificate authorizing it, the New York commission observed. *Re Fink, Case 21111, May 10, 1960.*

Higher Rates for Dial Service. Following substantially completed conversion to dial operation by a small telephone company, the Oregon commission approved a requested rate increase, based on the added investment, making the increase contingent upon the actual cut over to dial service. *Re Mt. Angel Teleph. Co. U-F-2231, Order No. 37211, May 13, 1960.*

Findings Insufficient. The Illinois supreme court, in overturning a commission certificate order, observed that the commission must make findings of fact upon the principal issues of the case and that such findings must be sufficiently specific to enable the court intelligently to review the administrative decision and ascertain whether the facts so found afford a reasonable basis for the order. *Brinker Trucking Co. et al. v. Illinois Commerce Commission et al. 166 NE2d 18.*

Taximetering Requirement Upheld. The Illinois supreme court ruled that an ordinance requiring the use of meters in taxicabs, including livery vehicles, was within the police power and constitutional. *City of Decatur v. Chasteen et al. 166 NE2d 29.*

Intervention in Gas Case Denied. The Federal Power Commission refused to permit the New York commission to intervene in a natural gas certificate proceeding where the state was not directly concerned, where none of the applicants would own or operate facilities in the state as a result of the proposals, and where no gas would be transported, resold, or consumed in the state as a result

of the proposals. *Re Peoples Gulf Coast Nat. Gas Pipeline Co. et al. Docket Nos. G-19086 et al. May 5, 1960.*

Power to Issue Subpoena. The Federal Power Commission ruled that a presiding examiner does not have the power to issue a subpoena duces tecum in the absence of a prior finding by the commission that the documentary material requested is relevant and material to inquiry. *Re East Tennessee Nat. Gas Co. Docket No. G-19530, April 25, 1960.*

Sales Price of Bonds. The Federal Power Commission approved the sale of 30-year, first mortgage bonds of an electric company, subject to competitive bidding, at a price of 99.569 per cent of the principal amount of $12 million and at an interest rate of 5⅛ per cent, with a good-faith deposit of $300,000. *Re California Electric Power Co. Docket No. E-6932, May 12, 1960.*

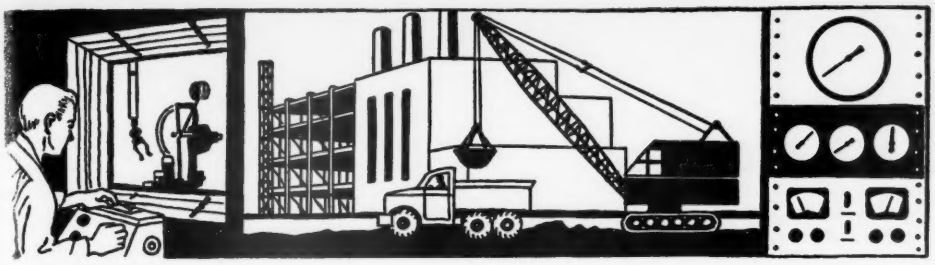
Credit Agreement. A subordination agreement between a holding company and the Export-Import Bank of Washington guaranteeing in some measure a loan by the bank to a subsidiary company, while constituting an extension of credit under the Holding Company Act, was exempted by the Securities and Exchange Commission from the declaration requirements of Rule 45(a) promulgated under § 12(b) of the act, in view of the purpose of the transaction to obtain credit for the purchase of generating equipment. *Re General Pub. Utilities Corp. File No. 50-54, Release No. 14225, May 11, 1960.*

Nuclear Research Agreement. A research agreement between a nonprofit stock corporation organized to operate a small experimental nuclear reactor and a number of utility companies providing substantial funds for the experimental operations was exempted by the Securities and Exchange Commission from the requirements of § 13 of the Holding Company Act relating to the control of the business of serving the operating needs of public utility companies. *Re Saxton Nuclear Experimental Corp. et al. File No. 70-3816, Release No. 14227, May 11, 1960.*

End-of-period Accounting. The Nevada commission held that end-of-period accounting better reflects a telephone company's revenue and phones-in-service situation where the company is experiencing a rapid expansion. *Southern Nevada Teleph. Co. v. Nevada Pub. Service Commission et al. I & S No. 215, Case No. 101211, April 28, 1960.*

Alternate Authority. The New York commission held that alternate route authority should be granted, where no new or different service will result, upon a showing that the proposed transportation will affect operating economies that will inure to the public interest. *Re Oneida Motor Freight, Inc. Case MT-3847, May 24, 1960.*

Exchange Area Boundaries. The Ohio commission held that it did not have authority to compel a change of telephone company boundaries by removing a portion of the territory being served by one company and placing it in the operating area of another company once the boundary lines had been established, so long as the company was ready, willing, and able to render reasonably adequate service to subscribers residing within the area. *Paisley v. General Teleph. Co. of Ohio, Case No. 27,094, May 24, 1960.*



Industrial Progress

oma Gas & Elec. to Install ion's Largest Combined Cycle Plant

Oklahoma Gas & Electric Com- will have the nation's largest ed cycle steam-gas turbine power generation station, ac- g to a recent announcement.

contract for an addition, will add more than 200,000 tts to OG&E's Horseshoe station, 20 miles east of Okla- City, has been awarded to the l Electric Company. Sargent dy, engineers, of Chicago is engaged by General Electric gn the plant.

ouncement of the new addi- as made jointly by Donald S. dy, chairman of the board and nt of OG&E, and Clarence H. , vice-president and group ex- —Electric Utility Group, Gen- lectric Company.

n completed in 1963, the new ed cycle plant is expected to least 4 per cent more efficient comparable conventional pow- nt of similar capacity.

ording to Mr. Kennedy, the n efficiency of the new plant lp the electric utility company the line against inflation and cost of generating and dis- ng electric power.

Linder said that General ic views the combined steam- rbine cycle as one of the most cant developments in electric generation in the past decade, rable to the introduction of re- or steam turbines.

he combined steam-gas turbine the gas turbine not only sup- power for its own generator, so supplies preheated combus- ir to the boilers, where the t heat is utilized.

ahoma Gas & Electric pio- in the installation of gas tur- bine units for electric power generation in the United States. Two 3500 kilowatt General Electric units installed in 1949 and 1952 at OG&E's Belle Isle station are the subject of study for engineers from all over the world investigating new techniques in power generation.

National Seminar for New Lightning Arrester

A LIGHTNING Arrester Seminar was launched on a nation-wide tour in June by H. K. Porter Company, Inc., Delta-Star Electric Division, Electric Service Works, Philadelphia. The seminar is being conducted by H. R. D. Biecker, product sales manager, and F. G. MacRae, lightning arrester specialist. The itinerary includes approximately 150 power utilities in the United States.

The theme of the seminar deals with theories of lightning and its effects on electrical distribution systems, arrester designs and functions, and a look into lightning arrester protection methods of the future. The talk takes about thirty minutes, after which there is a half hour open discussion for questions and answers.

The traveling seminar has an exhibit including cutaway samples of the new Type DS shorter arrester and a display featuring component parts and materials used in manufacturing the arrester's oxidized silicon carbide valve element. Also included with the seminar are dramatic lightning photographs and a colorful thirty-page flip chart illustrating technical highlights of the discussion.

"Electric City, U.S.A." Being Built in New Jersey at Cost of $190 Million

STARTING with all-electric Gold Medallion homes priced as low as $12,990, construction began recently on $190 million "Electric City, U.S.A". which will cover a 2500 acre area in northern New Jersey and house an estimated 30,000 people upon completion.

Details concerning the largest all-electric community development being undertaken within commuting distance of New York were announced by the East Orange, N. J., development firm of W. J. Happel & Company, General Electric Company and Jersey Central Power & Light Company.

Designed for luxury living, "Electric City, U.S.A." will have 6,000 Gold Medallion private homes, 5,000 apartment units, a 100-acre industrial park, shopping centers, schools and related construction necessary for complete community development.

Every one of the 6,000 homes in all price ranges from $12,990 to $24,990 will be awarded a Gold Medallion, the national symbol of highest quality and electrical excellence. It signifies that these new homes are electrically heated, wired for full housepower, designed to provide light for living and equipped with pushbutton, automatic electric kitchens.

New M. W. Kellogg Brochure: "Power Piping Field Erection"

FIELD Erection of high-temperature, high-pressure power piping in modern power-generating plants is the topic of a new 12-page brochure published by the Power Piping Division of The M. W. Kellogg Company, a world leader in this specialized field. Illustrated with photos and diagrams, the brochure emphasizes the increased importance of piping erection proficiency, especially for today's high-efficiency stations.

One section of the two color brochure tells how Kellogg manages and

(*Continued on page* 20)

staffs its Field Erection projects; how detailed plans are developed and executed; and how field-erection costs and quality are controlled.

Another section discusses welding and other important technical aspects of power piping Field Erection. K-Weld®, Kellogg's unique gas-shielded arc-welding process, and K-Insert Welding are highlighted.

Copies of "Power Piping Field Erection" are available on request to The M. W. Kellogg Company, 711 Third avenue, New York 17, New York.

Texas Eastern Plans Expansion

TEXAS Eastern Transmission Corporation recently announced plans for a 50-million-cubic-foot expansion in daily delivery capacity of its natural gas pipeline system.

"The majority of the gas will go to fifteen present customers for whom Texas Eastern is the so[le] plier of natural gas," accord[ing] Orville S. Carpenter, presid[ent] the company. "An applicatio[n] been filed with the Federal Commission seeking authoriza[tion] make the sales and to construc[t] pipeline and compression fa[cilities] that will be required to deliv[er] larger quantities of natural ga[s]. cost of this program will be ap[pro]imately $17.5 million."

New facilities required to the increased deliveries includ[e] proximately 66 miles of 30 diameter pipeline loops to be to the company's system be Vidor, Texas, and Lambertville Jersey; the addition of 33,710 power in compression equipm[ent] four existing gas compresso[r] tions, and the necessary me regulating facilities, Mr. Car said.

Construction on the new fa will begin as soon as authori from the Commission is receiv said.

Hubbard-Kearney Labora Increases Capacity

TO be able to develop new advanced equipment for ele utilities and industrial power tems, Hubbard and Company cago, and James R. Kearney poration, St. Louis, manufac of electrical apparatus and po hardware, are adding significan equipment at the Hubbard-Ke Electrical Research Laborato McCook, Illinois.

Four new transformers have been installed at the labora primarily for the testing of Ke Corporation products and tho the Three E division of Hubbar Company. The largest addition produce momentary currents 300,000 amps. It is one of the est capacity units operating United States.

With the addition of this equipment, the Hubbard-Ke Laboratory becomes one of the ing centers in America for th velopment and testing of distri apparatus.

Booklet Describes DMC Direct-Mail Programs

"THE VIP Series," a 36 booklet prepared by DMCP ciates, Inc., a Toledo-based ne of direct mail advertising firm

offered without charge to firms ganizations in the public utility

booklet outlines information ces and various types of direct rograms, explaining objectives sults of successful campaigns. "VIP" in the booklet title for "Versatile in Price, Ver- in Programing and Very Im- t Prospects," the company ns.

escribes individual features of P series, including the pop-up, r, die-cut, giant size, feature folder and dimensional type pieces. In a section devoted effectiveness of successful programs, 16 case histories rovided.

Copies of the VIP booklet may be obtained by writing on company letterhead to DMCP Associates, Inc., 1814 Jefferson ave., Toledo 2, Ohio.

G-E Bulletin Published on Aluminum Line Traps

A NEW bulletin on General Electric aluminum line traps for electric utility systems has been published by the company's Communication Products Department.

The eight-page publication—Bulletin ECC-113—describes the line traps' light weight, high current ratings, performance capabilities, long life and easy installation.

Aluminum line traps are used to assure normal operation of power-line carrier-current channels under a variety of adverse conditions which otherwise might disrupt service.

Bulletin ECC-113 is available from the General Electric Communication Products Department, P.O. Box 4197, Lynchburg, Va.

Kuhlman Uprates Complete Line Of Distribution and Power Transformers

P. M. GREEN, Jr., general sales manager of Kuhlman Electric Company, said that all ratings of Kuhlman transformers, 5 through 10,000 KVA, will be increased 12 per cent. A transformer rated 25 KVA will provide 25 KVA at 55° temperature

(*Continued on page 22*)

rise and 28 KVA at 65° rise with no sacrifice in transformer life. The uprating will apply to both self-cooled and forced-air cooled ratings of medium power transformers.

Upratings are made possible because of the inherently good thermal characteristics of Kuhlman transformers and the use of a new and improved insulation system. The new insulation system will be known as Kuhlman SPI-65.

Cleveland Model 92 Trencher Featured in 12-Page Folder

A SMALL, compact, tough trencher for city and suburban work, the Cleveland Model 92 Trencher is described in a new 12-page folder published recently by The Cleveland Trencher Company.

Copies may be obtained by writing for Bulletin L-108 to The Cleveland Trencher Company, 20100 St. Clair avenue, Cleveland 17, Ohio.

A-C Names Four to Nuclear Power Dept.

ALLIS-CHALMERS has announced the appointment of four men to its nuclear power department as follows:

Glenn J. Kangas, Thomas J. McDonald, Robert K. Stiles, and Lloyd E. Vlies.

All four are graduate mechanical engineers and recently completed Allis-Chalmers graduate training course.

New IBM Solid State Data Processing System

INTERNATIONAL Business Machines Corporation recently announced the advanced solid-state IBM 7074 data processing system. The new computer is twice as fast processing business data and is up to twenty times as fast in scientific computation as the IBM 7070 system to which it is related. Typical 7074 systems will sell or rent for about twenty-two per cent more than 7070 system prices.

Any IBM 7070 can be converted to a 7074 system in the customer's office. The major change is the replacement of the three 7070 modules with two high-speed 7074 components.

The "building block" design of the 7074 lends itself to growth to match user needs. The capabilities of the 7070 and 7074 now range from those of a medium-scale system to those well within the range of large-scale systems. Both systems offer five models of the processing unit; four models of core storage; and six models of core storage control units.

Additionally, the 7074 can process any work planned for the 7070 system. According to Y. P. Dawkins, director of marketing, data processing division, "No time need be lost for conversion or rewriting the 7070 programs—the detailed instructions that tell a computer what to do with the data fed into it. Thus, 7070 programs, which comprise the most comprehensive set of programing systems ever developed by a manufacturer in support of a data processing system, can be put on 7074 equipment directly."

A typical 7074 system will sell for $1,284,350 and will rent for $29,300 a month. Comparable prices for the 7070 system are $1,077,400 and $24,000.

The 7074 is the seventh solid-state data processing system to be marketed by IBM. Other fully-transistorized systems are the 1620, 1401, 7070, 7080, 7090 and the STRETCH class computers similar to that being readied by IBM for delivery to the Atomic Energy Commission.

G-E Appointment

J. J. WILLIAM BROWN has been appointed manager-Direct Conversion Projects Operation, it was announced recently by James F. Young, manager of General Electric Company's Electric Utility System Engineering and Planning Operation.

Mr. Young said that the new operation will "evaluate the technical and economic feasibility of developments in direct conversion process for application by the electric utility industry."

"Initially this new operation will concentrate on the magnethohydrodynamic (MHD) process, but will also closely follow such developments as thermionic conversion, thermoelectricity and fuel cells," Mr. Young said.

All of the exotic concepts being examined will be considered primarily for application by the electric utilities as a means of bulk power generation, Mr. Young noted.

Westinghouse Redesigns Circle W Trademark and Logotype

THE Circle W trademark of the Westinghouse Electric Corporation has been redesigned for the fifth time in the 74-year history of the company "to keep the symbol modern and to improve our corporate ide
Howard S. Kaltenborn, vice
dent-assistant to president, h
nounced.

The new trademark retains t
ditional circle but the dimension
been changed and three smal
circles have been added to the
of the W.

"The result," Mr. Kaltenbor
"is that, although only one
original elements—the W—has
appreciably altered, the new
has greatly increased flexibilit
torial interest and memorabilit

Further, it is decorative, an
designed specifically to suggest
pertinent to our business. So
these ideas are a molecular stru
wires and plugs, a wiring di
and tubes and light bulbs."

G-E Mobile Telephone Bulletin Available

BULLETIN ECR-801 showing
eral Electric Secode dial radio
phone equipment is now av
from G-E's Communication Pr
Department, Lynchburg, Va.

The publication describes ho
diotelephone service identical t
line service can be achieved with
way dialing, using a standard
phone dial and mobile radio e
ment.

Federal Pacific Issues Bulleti New "Fusematic" Concep

BULLETIN 6020, an eight-page
chure covering Federal Pacific's
"Fusematic" concept in switch
protection, has been published b
company.

Described in the bulletin are th
tails of why the Fusematic meth
considered superior for contro
modern electrical feeder syste
the 600 volt class—when high i
rupting capacities are needed.
method centers around the Fuse
device itself, which is an integra
ordinated combination of a p
circuit breaker and current-lim
fuses.

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eral Pacific's new Fusematic sy
are outlined: 1) main low-vo
switchboards; 2) feeder circuits
tecting bus runs and distribution
elboards; 3) motor control; 4) m
control center main breaker; an
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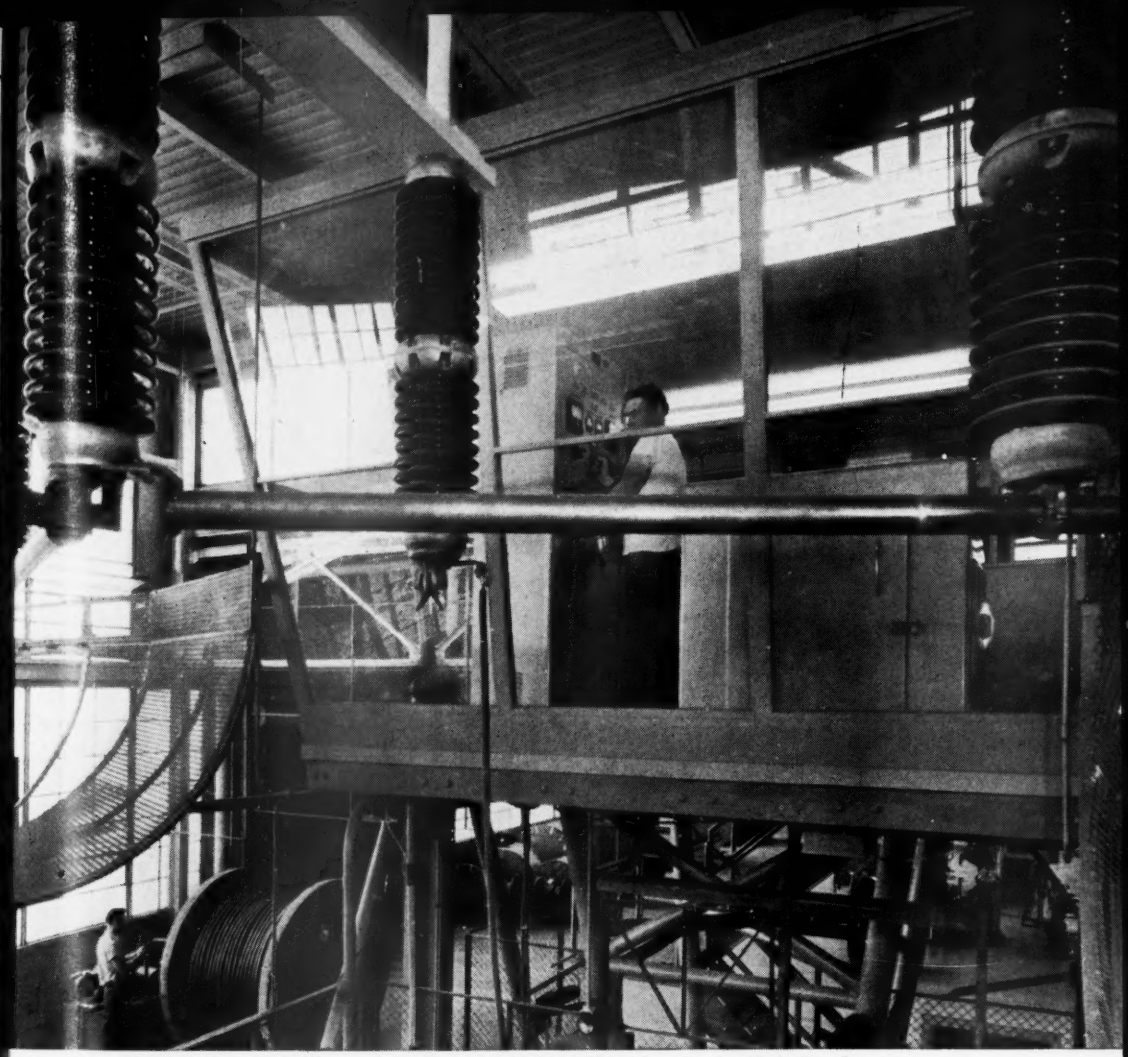

ere is a section of final testing area. Voltage tests are being applied to *full reel lengths* of cable before shipment.

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Everything you need to know about Anaconda Buty (AB) high-voltage cable is neatly summed up in a new booklet, DM-5903, "Anaconda High-Voltage Durasheath* Cable." For your copy, write to: Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y. *Reg. U.S. Pat. Off. 6023

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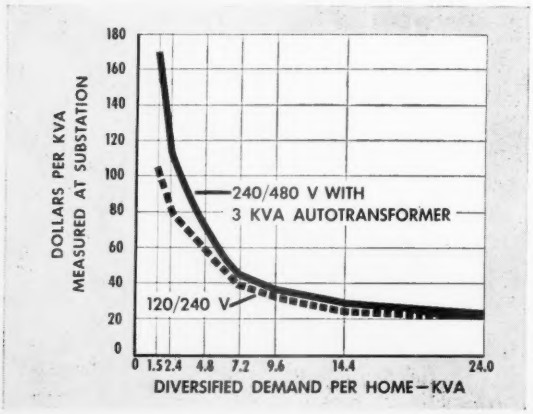
CONTRIBUTORS to the study are, left to right, H. E. Campbell, M. W. Gangel, R. C. Ender, V. C. Talley, all of General Electric's Electric Utility Engineering Section.



LOWER COST of the 120/240 v secondary system from feed point through meter is illustrated by this chart. Cost curves are based on 140 ft. secondary spans, 6750 kva load per feeder, and 12.47 kv primary.

CONTROLLING THE COSTS of an expanding resid tial power distribution system is one of he m complex problems faced by an electric utili y tod To supplement the work of utilities in his a General Electric engineers recently used a dig computer to calculate 25,000 combinatio ns of many cost factors involved. Their repo t, wh analyzes these data, was presented at the w nter g eral meeting of the AIEE.

SOME INPUT ELEMENTS supplied to the ompu for its 2½-hour run were primary vo tages 4.16 kv and 12.47 kv, secondary voltage s of 12 240 v and 240/480 v single phase, feeder los number of customers per transformer, nu mber a sizes of primary mains and laterals, sizes a lengths of secondary conductors, voltage d rops, a sizes and loadings of distribution transfor mers.

CONCLUSIONS of the study include the followin

- The 120/240 v linear coverage overhead s ondary system is generally more economi than the 240/480 v system when served a 4.16 kv or 12.47 kv primary.
- Except for the lighter customer dema supplied by a 4.16 kv primary, it is e nomical to load the primary feeders to maximum levels considered in the stu 3000 kva at 4.16 kv and 9000 kva at 12 kv.
- For residential load levels within the ra of 1.5—24.0 kva, a primary voltage of 12 kv costs less than 4.16 kv in areas of n construction.
- The system designed at the lowest cost d not necessarily use the entire available v age spread. This is particularly true at higher customer loads.
- A single secondary conductor size will e nomically serve a wide range of loads. C ductor sizes as large as 397.5 MCM Al be justified at the larger loads considered.

A GROWING POPULATION and a rising standard living call for a rapidly accelerating exp ansion distribution capacity. This study indicate s that search for the most economical expansion pattern greatly facilitated by the use of digital c ompute For a copy of the report or for informa ion abo applying this study's techniques to an a nalysis your own distribution system, write Secti n 604-4 General Electric Company, Schenectady N.Y.

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